TravelMate P633M/P633V

SERVICE GUIDE

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

г. Санкт-Петербург, (812) 951-37-99, 8-921-951-37-99

Распечатайте эту страницу или запишите код - V14SJOL1 и предъявите для получения

10% скидку на:

- Ремонт ноутбуков, планшетов
- Ремонт и обслуживание настольных компьютеров
- Ремонт LCD мониторов
- Ремонт источников бесперебойного питания (ИБП)
- Ремонт mp3 плееров
- Ремонт GPS навигаторов
- Ремонт электронных книг
- Ремонт смартфонов, телефонов, КПК
- На запчасти и комплектующие для компьютеров, ноутбуков, планшетов, телефонов, КПК, смартфонов и т.д.

20% скидку на

услуги по восстановлению данных с жестких дисков, внешних жестких дисков, CD, DVD, Flash

Адреса сервис центров можно уточнить по телефонам:
(812) 951-37-99, 8-921-951-37-99
г. Санкт-Петербург

WWW.MYCOMP.SU

Revision History

Refer to the table below for the updates made to this TravelMate P633M/P633V service guide.

Date	Chapter	Updates

Service guide files and updates are available on the ACER/CSD website. For more information, go to http://csd.acer.com.tw.The information in this guide is subject to change without notice.

Disclaimer

The information in this guide is subject to change without notice.

There are no representations or warranties, either expressed or implied, with respect to the contents hereof and specifically disclaims any warranties of merchantability or fitness for any particular purpose. The software described in this manual is sold or licensed "as is". Should the programs prove defective following their purchase, the buyer (not the manufacturer, distributor, or its dealer) assumes the entire cost of all necessary servicing, repair, and any incidental or consequential damages resulting from any defect in the software.

Copyright

© 2012 by Acer Incorporated. All rights reserved. No part of this publication may be reproduced, transmitted, transcribed, stored in a retrieval system, or translated into any language or computer language, in any form or by any means, electronic, mechanical, magnetic, optical, chemical, manual or otherwise, without the prior written permission of Acer Incorporated.

HDMI, the HDMI logo, and High Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing, LLC in the United States and other countries.

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Conventions

The following conventions are used in this manual:

⚠ WARNING:
Indicates a potential for personal injury.

⚠ CAUTION:
Indicates a potential loss of data or damage to equipment.

+ IMPORTANT:
Indicates information that is important to know for the proper completion of a procedure, choice of an option, or completing a task.

The following typographical conventions are used in this document:

- Book titles, directory names, file names, path names, and program/process names are shown in *italics*.

  Example:

  the *DRS5 User's Guide*

  /usr/local/bin/fd

  the */TPH15spool_M* program

- Computer output (text that represents information displayed on a computer screen, such as menus, prompts, responses to input, and error messages) are shown in constant width.

  Example:

  ```
  [01] The server has been stopped
  ```

- User input (text that represents information entered by a computer user, such as command names, option letters, and words) are shown in constant width bold.

  Variables contained within user input are shown in angle brackets (< >).

  Example:

  At the prompt, type run **`<file name> -m`**

- Keyboard keys are shown in ***bold italics***.

  Example:

  After entering data, press ***Enter***.

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

General information

Before using this information and the product it supports, read the following general information.

This service guide provides you with all technical information relating to the basic configuration for Acer's global product offering. To better fit local market requirements and enhance product competitiveness, your regional office may have decided to extend the functionality of a machine (such as add-on cards, modems, or extra memory capabilities). These localized features are not covered in this generic service guide. In such cases, contact your regional office or the responsible personnel/channel to provide you with further technical details.

When ordering FRU parts: Check the most up-to-date information available on your regional Web or channel. If, for whatever reason, a part number change is made, it may not be noted in this printed service guide.

Acer-authorized Service Providers: Your Acer office may have a different part number code than those given in the FRU list in this service guide. You must use the list provided by your regional Acer office to order FRU parts for repair and service of customer machines.

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

CHAPTER 1
Hardware Specifications

Features 1-5
- Operating System 1-5
- Platform 1-5
- System Memory 1-5
- Display 1-5
- Graphics 1-6
- Storage Subsystem 1-6
- Audio Subsystem 1-7
- Communication 1-7
- Privacy Control 1-8
- Power Adapter and Battery 1-8
- Keyboard and Pointing Device 1-8
- I/O Ports 1-9
- Software and Tools 1-9
- Optional Items 1-10
- Warranty 1-11
- Dimensions and Weight 1-11
- Environment 1-11

Notebook Tour 1-12
- Open Front View 1-12
- Close Front View 1-14
- Left View 1-15
- Right View 1-16
- Base View 1-17
- Indicators 1-18
- Touchpad Basics 1-19
- Keyboard 1-20
- Hotkeys 1-23
- Special Keys 1-24
- D2D Recovery 1-25
- System Block Diagram 1-26

Specification Tables 1-27
- Computer Specifications 1-27
- System Board 1-28
- Processor 1-28
- Processor Specifications 1-29
- Heat Sink Fan True Value Table 1-29
- System Memory 1-29

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook

РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Memory Combinations 1-30
Graphics Controller 1-30
System BIOS 1-31
Keyboard 1-31
Hard Disk Drive 1-32
SSD Drive 1-33
Card Reader 1-33
LCD Panel 1-33
Supported LCD Resolutions 1-34
Supported GPU Resolutions 1-34
Audio Codec 1-35
Audio Interface 1-35
Webcam 1-35
LAN 1-35
Wireless LAN 1-36
USB Interface 1-37
HDMI Port 1-37
Expansion Card 1-37
System LED Indicators 1-37
Battery Pack 1-38
AC Adapter 1-38
System Power Management 1-38
System DMA Specification 1-39
System Interrupt Specification 1-39
System IO Address Map 1-39

CHAPTER 2
System Utilities

BIOS Setup Utility 2-3
Navigating the BIOS Utility 2-3
BIOS Menus 2-4

BIOS Flash Utilities 2-12
DOS Flash Utility 2-13
WinFlash Utility 2-13

Remove HDD/BIOS Password Utilities 2-14
Removing the HDD Password 2-14
Removing the BIOS Passwords 2-15

Using DMI Tools 2-16
LAN EEPROM Utility 2-16

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

CHAPTER 3
Machine Maintenance

Machine Disassembly and Replacement 3-5
Recommended Equipment 3-5
Replacement Requirements 3-5
Pre-disassembly Instructions 3-6

Disassembly Process 3-7

External Module Disassembly Process 3-8
External Modules Disassembly Flowchart 3-8
Removing the Battery Pack 3-9
Removing the Base Door 3-10
Removing the HDD Module 3-11
Removing the WLAN Module 3-15
Removing the DIMM Modules 3-17
Removing the Keyboard 3-18

Main Unit Disassembly Process 3-20
Main Unit Disassembly Flowchart 3-20
Removing the Palmrest Module/Upper Case 3-21
Removing the Touchpad/Fingerprint Module 3-24
Removing the RF Key Control Module 3-29
Removing the TPM Board 3-30
Removing the Mainboard 3-31
Removing the Thermal Module 3-34
Removing the CPU 3-36
Removing the RTC Battery 3-37
Removing the Speakers 3-38
Removing the DC In Module 3-39
Removing the LCD Module 3-40

LCD Module Disassembly Process 3-42
LCD Module Disassembly Flowchart 3-42
Removing the LCD Bezel 3-43
Removing the LCD Hinges 3-45
Removing the Microphone 3-46
Removing the Camera Board 3-47
Removing the LCD Panel 3-49
Removing the LCD FPC Cable 3-50

LCD Module Reassembly Process 3-52
Replacing the LCD FPC Cable 3-52
Replacing the LCD Panel 3-54

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Replacing the Camera Board 3-55
Replacing the Microphone 3-57
Replacing the LCD Hinges 3-58
Replacing the LCD Bezel 3-59

Main Unit Reassembly Process 3-61
Replacing the LCD Module 3-61
Replacing the DC In Module 3-63
Replacing the Speakers 3-64
Replacing the RTC Battery 3-65
Replacing the CPU 3-66
Replacing the Thermal Module 3-67
Replacing the Mainboard 3-69
Replacing the TPM Board 3-72
Replacing the RF Key Control Board 3-73
Replacing the Touchpad/Fingerprint Module 3-74
Replacing the Palmrest Module/Upper Case 3-79

External Module Reassembly Process 3-82
Replacing the Keyboard 3-82
Replacing the DIMM Modules 3-84
Replacing the WLAN Module 3-85
Replacing the HDD Module 3-87
Replacing the Base Door 3-91
Replacing the Battery Pack 3-92

CHAPTER 4
Troubleshooting

General Information 4-3
Power On Issues 4-4
No Display Issues 4-5
LCD Failure 4-7
Keyboard Failure 4-8
Touchpad Failure 4-9
Internal Speaker Failure 4-10
Microphone Failure 4-12
USB Failure 4-13
WLAN Failure 4-14
Bluetooth Failure 4-15
Card Reader Failure 4-16
Thermal Unit Failure 4-17
Other Functions Failure 4-18

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Intermittent Problems 4-19

Undetermined Problems. 4-19

Error Codes 4-20

BIOS Beep Codes 4-21

POST Codes 4-26
Component Codes. 4-26
Progress Codes. 4-30

CHAPTER 5
Jumper and Connector Locations

Mainboard Layout 5-3

Clearing Password Check and BIOS Recovery 5-5
Clearing the BIOS Passwords 5-5
Performing a BIOS Recovery 5-6

CHAPTER 6
FRU List

TravelMate P633V/P633M Exploded Diagrams. 6-4
Main Assembly 6-4
LCD Assembly. 6-6

FRU List 6-8

CHAPTER 7
Test Compatible Components

Microsoft Windows 7 Environment Test. 7-4

CHAPTER 8
Online Support Information

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

CHAPTER 1

Hardware Specifications

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Features 1-5
Operating System 1-5
Platform 1-5
System Memory 1-5
Display 1-5
Graphics 1-6
Storage Subsystem 1-6
Audio Subsystem 1-7
Communication 1-7
Privacy Control 1-8
Power Adapter and Battery 1-8
Keyboard and Pointing Device 1-8
I/O Ports 1-9
Software and Tools 1-9
Optional Items 1-10
Warranty 1-11
Dimensions and Weight 1-11
Environment 1-11

Notebook Tour 1-12
Open Front View 1-12
Close Front View 1-14
Left View 1-15
Right View 1-16
Base View 1-17
Indicators 1-18
Touchpad Basics 1-19
Keyboard 1-20
Hotkeys 1-23
Special Keys 1-24
D2D Recovery 1-25
System Block Diagram 1-26

Specification Tables 1-27
Computer Specifications 1-27
System Board 1-28
Processor 1-28
Processor Specifications 1-29
Heat Sink Fan True Value Table 1-29
System Memory 1-29
Memory Combinations 1-30

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Graphics Controller 1-30
System BIOS 1-31
Keyboard 1-31
Hard Disk Drive 1-32
SSD Drive 1-33
Card Reader 1-33
LCD Panel 1-33
Supported LCD Resolutions 1-34
Supported GPU Resolutions 1-34
Audio Codec 1-35
Audio Interface. 1-35
Webcam. 1-35
LAN 1-35
Wireless LAN 1-36
USB Interface 1-37
HDMI Port 1-37
Expansion Card 1-37
System LED Indicators 1-37
Battery Pack 1-38
AC Adapter 1-38
System Power Management 1-38
System DMA Specification 1-39
System Interrupt Specification 1-39
System IO Address Map 1-39

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook.
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Hardware Specifications and Configurations

Features

The following is a summary of the computer's many features. vPro models refer to Travelmate P633V, non-VPro models refer to Travelmate P633M.

Operating System

- Genuine Windows® 7 Professional 64-bit Service Pack 1
- Genuine Windows® 7 Professional 32-bit Service Pack 1

Platform

- Intel Huron and Chief River platform
  - Supports the second generation Intel® Core™ Mobile Processor Family (Ivy/Sandy Bridge)
  - Processor models and capacities are listed on the FRU list on page 6-8.
- Chipset:
  - vPro: Mobile Intel® QM77 (12 MB SPI) Express Chipset
  - Non-vPro: Mobile Intel® HM77 (12 MB SPI) Express Chipset

System Memory

- Two DIMM slots supports DDR3-1333/1600 DDR3 SO-DIMM
- 8 GB maximum memory capacity (using two 4 GB modules)
- Supports dual channel memory modes
  - Up to 4 GB of DDR3 system memory, upgradable to 8 GB using two soDIMM modules (for 64-bit OS)
  - Up to 2 GB of DDR3 system memory, upgradable to 4 GB using two soDIMM modules (for 32-bit OS)

Display

- 13.3" HD 1366 x 768 resolution, Acer ComfyView LED-backlit TFT LCD
- Mercury-free, environment-friendly
- Super-slim design

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Graphics

- Intel® HD Graphics 4000 with 128 MB of dedicated system memory, supporting Microsoft® DirectX® 11, OpenGL® 3.1, OpenCL™ 1.1
- Intel® HD Graphics 3000 with 128 MB of dedicated system memory, supporting Microsoft® DirectX® 10.1
- Dual independent display support
- 16.7 million colors
- Internal resolutions and refresh rate supported (applies to both UMA and Discrete models):
  - 800×600, 60 Hz
  - 1024×768, 60 Hz
  - 1280x600, 60 Hz
  - 1280×720, 60 Hz
  - 1280×768, 60 Hz
  - 1360×768, 60 Hz
  - 1366x768, 60 Hz
- External resolution and refresh rate supported:
  - HDMI port: 1920×1080, 60 Hz
  - VGA port: 2048×1536, 75 Hz

Storage Subsystem

Hard disk drive

- 320/500 GB with enhanced Acer DASP (Disk Anti-Shock Protection)
- HDD models and capacities are listed on the FRU list on page 6-8.

Solid state drive

- 128/256 GB
- SSD models and capacities are listed on the FRU list on page 6-8.

Card reader

- Multi-in-1 card reader slot
  - Supports SD™ Card, MultiMediaCard™ (MMC), Memory Stick™ (MS), Memory Stick PRO™ (MS PRO), xD-Picture Card™ (xD) cards

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Audio Subsystem

- High-definition audio support
- Two built-in 2 Watt, 5 cc Chamber stereo speakers
- MS-Sound compatible
- Acer PureZone technology with two built-in stereo microphones, featuring beam forming, echo cancellation, and noise suppression technologies
- Built-in digital microphone
- Conexant Audio Codec CX-20584 21Z

Communication

Webcam

- 1.3 MP HD webcam
- Acer Video Conference software, featuring:
  - Acer Crystal Eye webcam with 1280×1024 resolution
  - 720p HD audio/video recording
  - Acer Video Conference Manager featuring Video Quality Enhancement (VQE) technology
  - Supports online video calls
  - Acer PureZone technology

Wireless and networking

- WLAN:
  - Intel® Centrino® Advanced-N 6235, 802.11a/b/g/n Wi-Fi CERTIFIED™ with Acer Nplify™, featuring MIMO technology
  - Foxconn 3rd WiFi 2x2 AGN+ BT4.0 Broadcom 43228+20702 (WiFi 43228 2x2 DB AGN+BT4.0 20702)
  - Foxconn 3rd WiFi 2x2 AGN+ BT4.0 Atheros WB222
  - Lite-on 3rd WiFi 2x2 AGN+ BT4.0 Atheros WB222
  - Acer InviLink™ Nplify™ 802.11a/b/g/n Wi-Fi CERTIFIED™
  - Supports Acer SignalUp technology and Intel® Wireless Display (Intel® WiDi)
- WPAN:
  - Mini-USB Bluetooth module 4.0 + HS
- LAN:
  - vPro: Intel® 82579LM Gigabit network connection with Intel® AMT 8.0, IEEE P802.3az Energy Efficient Ethernet™ (EEE)
  - Non-vPro: Broadcom NetLinkR BCM57761 controller

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Privacy Control

- Acer ProShield Security Manager including:
  - BIOS Settings: BIOS Password, Boot Order, and Import/Export BIOS Settings
  - Credential Manager: Fingerprint Registration
  - Pre-Boot Authentication: Fingerprint Management
  - Data Protection: File Encryption & Decryption, Personal Secure Drive
  - Data Removal: File Shredder
- Enhanced Acer DASP (Disk Anti-Shock Protection)
- Acer Bio-Protection fingerprint solution, featuring Pre-Boot Authentication (PBA), computer protection
- Trusted Platform Module (TPM) solution
- BIOS supervisor, user, and HDD passwords
- Kensington lock slot

Power Adapter and Battery

Power adapter

- 3-pin 65 W AC adapter
  - 95 (W) x 50 (D) x 25.4 (H) mm (3.74 x 1.96 x 1 inches)
  - 216 g (0.47 lbs.) with 180 cm DC cable

Battery

- 87 Wh 6000 mAh 8-cell Li-ion battery pack
  - Battery life: 12 hours
- 43.8 Wh 2960 mAh 4-cell Li-ion battery pack
  - Battery life: 6 hours
- ACPI 3.0-compliant power management system
- ENERGY STAR compliant

Keyboard and Pointing Device

Keyboard

- 88-/89-/93-key Acer FineTouch™ keyboard with international language support
- Hotkeys for volume and brightness level, media playback, wireless and sleep functions, and display and touchpad toggle
- Control keys: Acer programmable key, Acer Backup key, Acer Bio-Protection fingerprint reader, Acer email key, Microphone mute key, and Communication key
- Windows® and Application keys
- Multilanguage support

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Touchpad

- Multi-gesture touchpad pointing device, supporting three-finger press, two-finger scroll, pinch, rotate, flip and swipe
- Touchpad lock hotkey
- Adjustable touchpad sensitivity function

I/O Ports

- 144-pin Acer ProDock connector
- ExpressCard®/34 slot
- Smart card reader slot
- Multi-in-1 card reader (SD™, MMC, MS, MS PRO, xD)
- Three USB 3.0 ports (one USB 3.0 port featuring power-off USB charging)
- eSATA / USB 2.0 port
- HDMI® port with HDCP support
- External display (VGA) port
- Headphone/speaker jack
- Microphone-in jack
- Ethernet (RJ-45) port
- DC-in jack for AC adapter

Software and Tools

Productivity

- Acer Backup Manager
- Acer ePower Management
- Acer eRecovery Management
- Acer PowerSmart Manager
- Acer ProDock Manager
- Adobe® Flash® Player 10.x/11x
- Adobe® Reader® 10.x
- Bing™ Bar
- BookLive (Japan only)
- Evernote (except Japan)
- Microsoft® Office Starter 2010: Includes limited-functionality Microsoft® Word and Excel with advertising; no PowerPoint or Outlook. Buy Office 2010 to use the full-featured software. (except Japan)
- newsXpresso
- Norton™ Online Backup
- Windows Live™ Essentials

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Manageability

- Acer Office Manager
- Intel® Small Business Advantage

Security

- Acer ProShield
- Absolute® Data Protect 60-day trial
- McAfee® Internet Security Suite Trial

Multimedia

- Corel® WinDVD®

Communication and ISP

- Acer Crystal Eye
- Acer Video Conference Manager
- Microsoft® Silverlight™
- Skype™

Web links and utilities

- Acer Accessory Store (Belgium, Denmark, France, Germany, Italy, Netherlands, Poland, Portugal, Spain, Sweden, United Kingdom)
- Acer Identity Card
- Acer Registration
- Acer Updater
- eBay® shortcut (Australia, Austria, Canada, France, Germany, Italy, India, Ireland, Mexico, Netherlands, Philippines, Poland, Russia, Singapore, Spain, Switzerland, United States, United Kingdom only)
- Netflix shortcut (Canada, Latin America, United States only)

Optional Items

- Acer ProDock
- 8-cell Li-ion 6000 mAh battery pack
- 4-cell Li-ion 2960 mAh battery pack
- 2/4 GB DDR3 soDIMM module
- 320/500 GB hard disk drive
- USB optical genius mini mouse
- External USB floppy disk drive
- 3-pin 65 W AC adapter

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Warranty

One-year International Travelers Warranty (ITW)

Dimensions and Weight

Dimensions

- Width × Depth × Height: 325 × 235 × 18.9/24.8 mm (12.79 x 9.25 x 0.74/0.97 in)

Weight

- with 4-cell battery pack: 1.72 kg (3.79 lbs.)
- with 8-cell battery pack: 1.90 kg (4.19 lbs.)

Environment

- Temperature:
  - Operating: 0 to 40 °C
  - Non-operating: -20 to 60 °C
- Humidity (non-condensing):
  - Operating: 20% to 80%
  - Non-operating: 20% to 80%

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Notebook Tour

This section provides an overview of the features and functions of the notebook.

Open Front View

Figure 1-1. Open Front View

Table 1-1. Open Front View

No.	Icon	Item	Description
1		Webcam LED	Indicates the webcam is active.
2	HD WEBCAM	Integrated webcam	Web camera for video communication.
3		Microphones	Two internal microphones for stereo sound recording.
4		Display screen	Also called liquid crystal display (LCD), displays computer output (configuration may vary by model).

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Table 1-1. Open Front View

No.	Icon	Item	Description
5	P	P key	Programmable key (configuration may vary by model).
		Acer email key	Opens your default email application.
		Backup key	Launches Acer Backup Management for three-step data backup.
		Microphone mute key	Mutes the microphone.
6		Power button/indicator	Turns the computer on and off. Indicates the computer's power status.
7		Keyboard	For entering data into your computer.
8		Fingerprint reader	Fingerprint reader for Acer ProShield Security Suite.
9		Click buttons (left and right)	The left and right buttons function like the left and right mouse buttons.
10	MultiGesture TOUCHPAD	Touchpad	Touch-sensitive pointing device which functions like a computer mouse.

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Close Front View

Figure 1-2. Close Front View

Table 1-2. Close Front View

No.	Icon	Item	Description
1		Power indicator	Indicates the computer's power status.
2		Battery indicator	Indicates the computer's battery status. • Charging: The light shows amber when the battery is charging. • Fully charged: The light shows blue when in AC mode.
3		HDD indicator	Indicates the hard disk drive is active.
4		Communication switch/indicator	Enables/disables the computer's communication devices / indicates the computer's wireless connectivity device status.

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Left View

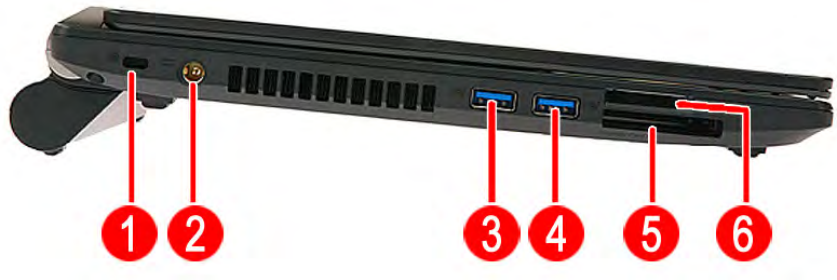
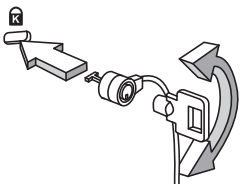


Figure 1-3. Left View

Table 1-3. Left View

No.	Icon	Item	Description
1		Kensington lock slot 	Connects to a Kensington-compatible computer security lock. **Note:** Wrap the computer security lock cable around an immovable object such as a table or the handle of a locked drawer. Insert the lock into the notch and turn the key to secure the lock. Some keyless models are also available.
2		DC-in jack	Connects to the AC adapter.
3		USB port with power-off charging	Connects to USB devices. **Note:** Supports power-off USB charging, allowing you to charge supported mobile devices while the notebook is switched off.
4		USB 3.0 port	Connects to USB devices.
5		ExpressCard/34 slot	Accepts one ExpressCard/34 module. **Note:** Push to remove/insert the module.
6		Multi-in-1 card reader slot	Accepts Secure Digital (SD), MultiMediaCard (MMC), Memory Stick PRO (MS PRO), xD-Picture Card (xD). **Note:** Push to remove/install the card. Only one card can operate at any given time.

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Right View

Figure 1-4. Right View

Table 1-4. Right View

No.	Icon	Item	Description
1		Microphone jack	Accepts inputs from an external microphone.
2		Headphones/speaker / line-out jack	Connects to audio devices (e.g., speakers, headphones).
3		USB 3.0 port	Connects to USB devices.
4	/e SATA	USB/eSATA port	Connects to USB or eSATA devices (only for certain models). **Note:** If you plug in an eSATA device you will have three USB ports available.
5	HDMI	HDMI port	Supports high-definition digital video connections.
6		External display (VGA) port	Connects to a display device (e.g., external monitor, LCD projector).
7		Ethernet (RJ-45) port	Connects to an Ethernet 10/100/1000-based network.

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Base View

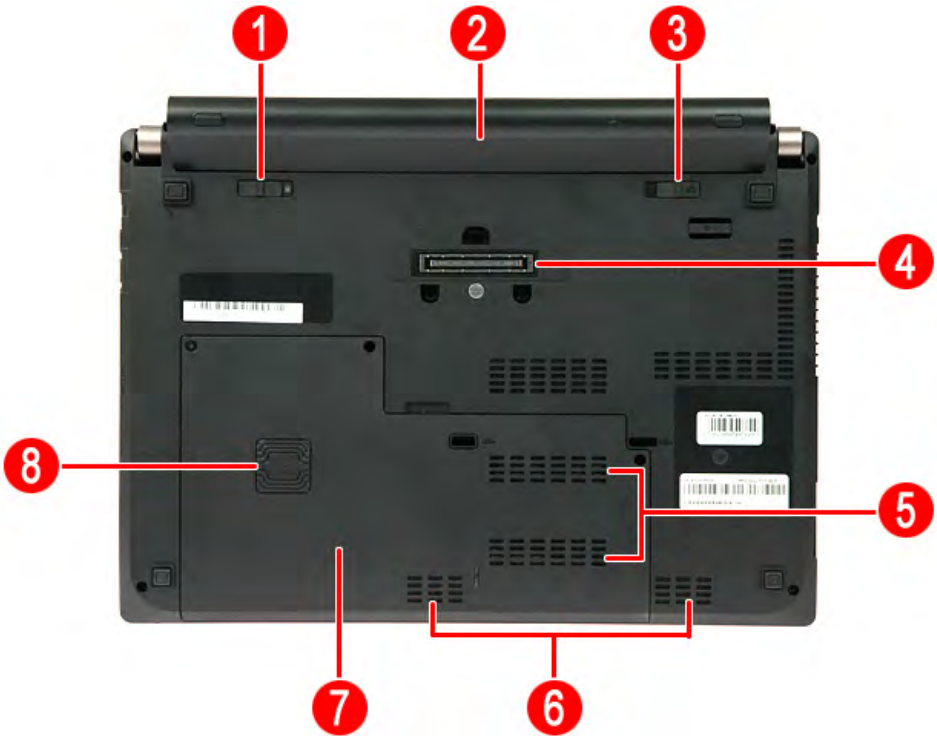


Figure 1-5. Base View

Table 1-5. Base View

No.	Icon	Item	Description
1		Battery lock	Locks the battery pack in position
2		Battery bay	Houses the computer's battery pack.
3		Battery release latch	Releases the battery for removal.
4		Acer ProDock connector	Connects to the optional Acer ProDock.
5		Memory compartment	Houses the computer’s main memory.
6		Speakers	Emit stereo sound.
7		HDD/WLAN module compartment	Houses the computer's hard disk and WLAN (optional) modules.
8		Acer DASP (Disk Anti-Shock Protection)	Protects the hard disk from shocks and bumps.

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Indicators

The computer has several easy-to-read status indicators.

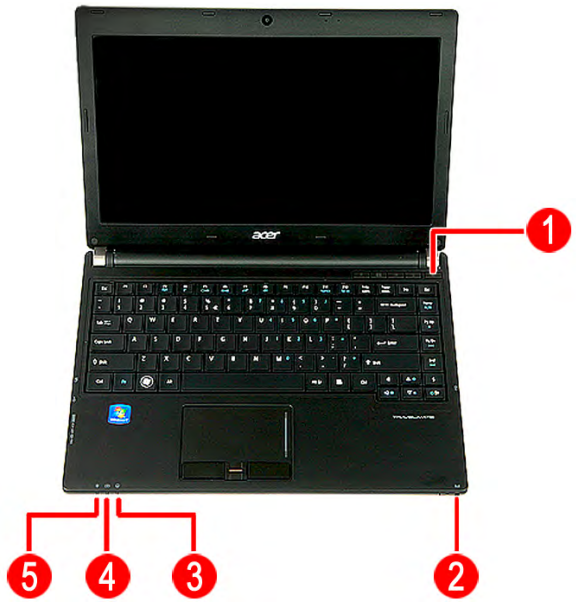


Figure 1-6. Indicators

Table 1-6. Indicators

	Icon	Item	Description
1		Power indicator	Indicates the computer's power status.
2		Communication indicator	Flashes amber when there is an active wireless connection.
3		HDD indicator	Flashes blue when there is hard drive activity.
4		Battery indicator	When the AC adapter is connected: ● Solid blue: The battery charge is at full capacity. ● Solid amber: Battery charging. ● Blinking amber: Battery is in abnormal stop charge or battery is in low power state. When the AC adapter is disconnected: ● Blinking amber: Battery charge is in critically low state ● Indicator off: Discharging state.
5		Power indicator	Indicates the computer's power status. ● Solid blue: The computer is turned on. ● Blinking amber: The computer is in power-saving mode. ● Indicator off: The computer is turned off.

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкций по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Touchpad Basics

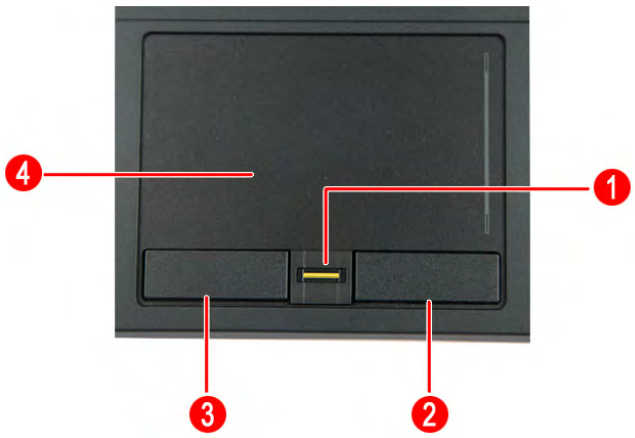


Figure 1-7. Touchpad

The following items show you how to use the touchpad with Acer Bio-Protection fingerprint reader.

- Move finger across the touchpad (4) to move the cursor.
- Press the left (3) and right (2) buttons located beneath the touchpad to perform selection and execution functions. These two buttons are similar to the left and right buttons on a mouse. Tapping on the touchpad is the same as clicking the left button of a mouse.
- Use Acer Bio-Protection fingerprint reader (1) supporting Acer FingerNav 4-way control function (only for certain models) to scroll up or down and move left or right a page. This fingerprint reader or button mimics your cursor pressing on the right scroll bar of Windows applications.

Table 1-7. Touchpad

Function	Left Button (3)	Right Button (2)	Touchpad (4)	Center button (1)
Execute	Quickly click twice.		Rapidly tap twice.	
Select	Click once.		Tap once.	
Drag	Click and hold, then use finger on the touchpad to drag the cursor.		Tap twice (at the same speed as double-clicking a mouse button); rest your finger on the touchpad on the second tap and drag the cursor.	
Access context menu		Click once.		
Scroll				Swipe up/ down/ left/right using Acer FingerNav 4-way control function (Manufacturing option).

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Keyboard

The keyboard contains an overlay numeric keys, inverted “T” cursor key, Windows® key, Application key, function lock keys, hotkeys, and media control keys controlling various computer features.

Figure 1-8. Keyboard

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкций по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Lock Keys

The keyboard has three lock keys which the user can toggle on and off.

Figure 1-9. Keyboard Lock Keys

Table 1-8. Keyboard Lock Keys

Lock key	Description
Caps Lock	When On, all typed alphabetic characters appears in uppercase.
Num Lock ***Fn*+*F11***	Off by default. When On, the overlay numeric keys acts as a numeric keypad. If an external keyboard or keypad is present, the Num Lock will have the following definitions: • When On, the system boots with external keyboard/keypad Num Lock status On. Internal keyboard overlay numeric keys are disabled. • The key can be turned on/off via the internal keyboard (***Fn*+*F11***) or the external keyboard/keypad. Num Lock affects the external keyboard/keypad only. • Shift state is NOT required for the cursor movement by the numeric keys. • The state of the Num Lock is not changed by the attachment/removal (hot plug) of the external keyboard/keypad.
Scroll Lock ***Fn*+*F12***	When On, the screen moves one line up or down when pressing the up or down cursor keys. Scroll Lock is not applicable for all applications.

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Windows Keys

The keyboard has two keys that perform Windows-specific functions.

Figure 1-10. Windows-specific Keys

Table 1-9. Windows-specific Keys

Key	Description
Windows Logo key	Pressed alone, this key has the same effect as clicking on the *Windows Start* button; it launches the *Start* menu. It can also be used with other keys to provide a variety of functions. Functions supported by Windows XP, Windows Vista, and Windows 7: • ⊞: Open or close the *Start* menu • ⊞+***R***: Open the *Run* dialog box • ⊞+***M***: Minimizes all windows • ***Shift***+⊞+***M***: Restore minimized windows to the desktop • ⊞+***F1***: Show the *Help* window • ⊞+ ***E***: Open *Windows Explorer* • ⊞+***F***: Search for a file or folder • ⊞+ ***D***: Display the desktop • ***Ctrl***+⊞+***F***: Search for computers (if you are on a network) • ***Ctrl***+⊞+***L***: Lock your computer (if you are connected to a network domain), or switch users (if you're not connected to a network domain) • ***Ctrl***+⊞+***Tab***: Moves focus from *Start* menu, to the *Quick Launch* toolbar, to the system tray (use ◁ or ▷ to move focus to items on the *Quick Launch* toolbar and the system tray) • ⊞+***Tab***: Cycle through programs on the taskbar • ⊞+***Break***: Display the *System Properties* dialog box Functions supported by Windows XP: • ⊞+***Break***: Display the *System Properties* dialog box • ⊞+***U***: Open the *Ease of Access Center* window
Application key	This key has the same effect as clicking the right mouse button; it opens the application's context menu.

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкций по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Hotkeys

The computer uses hotkeys or key combinations to access most computer controls. To activate hotkeys, press and hold the ***Fn*** key before pressing the key in the combination.

Figure 1-11. Hotkeys

Table 1-10. Hotkeys

Hotkey	Icon	Function	Description
Fn*+*F3		Communication device toggle	Enables/disables the computer's communication devices.
Fn*+*F4		Sleep	Puts the computer in Sleep mode.
Fn*+*F5		Display toggle	Switches the display output between the display screen, external monitor (if connected) or both.
Fn*+*F6		Screen blank	Turns the display screen backlight off to save power. Press any key to return.
Fn*+*F7		Touchpad toggle	Turns the touchpad on or off.
Fn*+*F8		Speaker toggle	Turns the speakers on or off.
Fn*+*Home		Play/Pause	Play or pause a selected media file.
Fn*+*Pg Up		Stop	Stop playback of the selected media file.
Fn*+*Pg Dn		Previous	Return to the previous media file.
Fn*+*End		Next	Jump to the next media file.
***Fn*+▷**		Brightness up	Increases the screen brightness.
***Fn*+◁**		Brightness down	Decreases the screen brightness.
***Fn*+△**		Volume up	Increases the sound volume.
***Fn*+▽**		Volume down	Decreases the sound volume.

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Special Keys

The Euro symbol

1. Open a text editor or word processor.
2. Hold ***Alt Gr*** and then press the **€** key.

NOTE:

Some fonts and software do not support the Euro symbol. See www.microsoft.com/typography/faq/faq12.htm for more information.

The US dollar sign

1. Open a text editor or word processor.
2. Hold ***Alt Gr*** and then press the **$** key.

NOTE:

This function varies according to the language settings.

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкций по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

D2D Recovery

The Acer Disk to Disk (D2D) recovery function allows you to use the recovery partition to troubleshoot your computer.

1. Restart the computer.
2. During POST, press ***F1*** to access the *BIOS Setup* screen.
3. Press ▷ to select the *Main* menu.
4. Press ▽ to select the *D2D Recovery* field and make sure it is set to **Enabled**.
5. Press ***F10*** to save settings and close the *BIOS Setup* screen.
6. During POST, press ***Alt***+***F10*** to enter the system recovery partition. This will display the *eRecovery Management* window.
7. Follow the onscreen instructions to return your computer to factory condition.

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

System Block Diagram

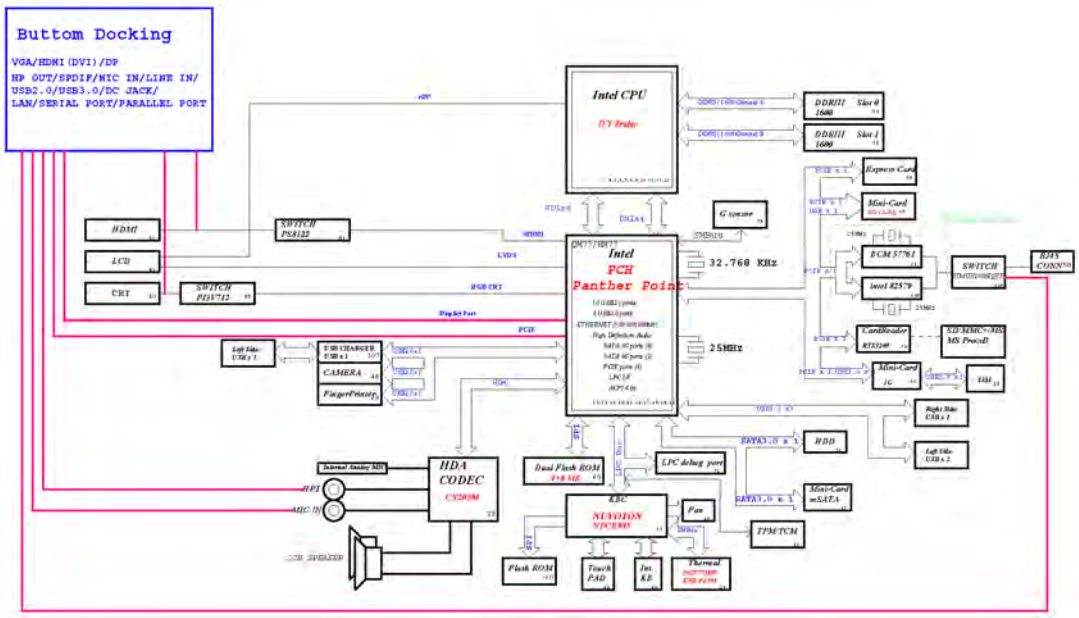


Figure 1-12. System Block Diagram

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкций по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Specification Tables

Computer Specifications

Item	Metric	Imperial
Dimensions		
Width	32.5 cm	12.79 in
Depth	23.5 cm	9.25 in
Height	1.89/2.48 cm	0.74/0.97 in
Weight	• 1.72 kg with 4-cell battery pack • 1.90 kg with 8-cell battery pack	• 3.79 lbs. with 4-cell battery pack • 4.19 lbs. with 8-cell battery pack
Input power		
Operating voltage	19 V, 65 W	
Operating current (max)	3.42 A	
Temperature		
Operating (not writing to optical disc)	0 to 35 °C	32 to 95 °F
Operating (writing to optical disc)	5 to 35 °C	41 to 95 °F
Nonoperating	-20 to 60 °C	-4 to 140 °F
Relative humidity		
Operating	10% to 90%	
Nonoperating	5% to 95%	
Maximum altitude (unpressurized)		
Operating	-15 to 3,048 m	-50 to 10,000 ft
Nonoperating	-15 to 12,192 m	-50 to 40,000 ft
Shock		
Operating	125 g, 2 ms, half-sine	TBD
Nonoperating	200 g, 2 ms, half-sine	TBD
Random vibration		
Operating	0.75 g zero-to-peak, 10 to 500 Hz, 0.25 oct/min sweep rate	
Nonoperating	1.50 g zero-to-peak, 10 to 500 Hz, 0.25 oct/min sweep rate	
NOTE: Applicable product safety standards specify thermal limits for plastic surfaces. The computer operates well within this range of temperatures.		

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

System Board

Item	Specification	Specification
System model	P633V	P633M
Core logic	Mobile Intel® QM77 Express Chipset	Mobile Intel® HM77 Express Chipset
Graphics	Intel® HD Graphics 3000/4000 integrated in the Intel® Core™ Mobile Processor	Intel® HD Graphics 3000/4000 integrated in the Intel® Core™ Mobile Processor
LAN	Intel® 82579LM	Broadcom NetLink® BCM57761
USB 3.0	Integrated in the Mobile Intel® QM77 Express Chipset	Integrated in the Mobile Intel® HM77 Express Chipset
Wireless LAN	• Foxconn BCM 43228+20702 • Foxconn Atheros WB222 • Liteon Atheros WB222 • Intel WLAN 6235AN.HMWG	• Foxconn BCM 43228+20702 • Foxconn Atheros WB222 • Liteon Atheros WB222 • Intel WLAN 6235AN.HMWG
Audio codec	Conexant CX-20584	Conexant CX-20584
Card reader	Built-in	Built-in

Processor

Item	Specification	Specification
System model	P633V	P633M
CPU type	Second Generation Intel® Core™ Mobile Processor Family • i7-3520M vPro • i5-3320M/i5-3360M vPro	Second Generation Intel® Core™ Mobile Processor Family • i7-3612QM • i5-3210M/i5-2450M • i3-3110M/i3-2370M
Core logic	Four execution cores· • L1 cache size: Two 32 KB instruction caches and two 32 KB data caches • L2 cache size: Two 256 KB • L3 cache size: 3 MB, 4 MB, 6 MB	
Chipset	Mobile Intel® QM77 Express Chipset	Mobile Intel® HM77 Express Chipset

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Processor Specifications

Item	CPU Speed	Cores/ Threads	Max Turbo Freq	Mfg Tech	L3 Cache	Max TDP	Core Voltage
i3-2370M	2.40 GHz	2C/4T	2.40 GHz	32 nm	3 MB	35 W	1.1 V
i3-3110M	2.30 GHz	2C/4T	2.30 GHz	32 nm	3 MB	35 W	1.1 V
i5-3210M	2.50 GHz	2C/4T	3.10 GHz	32 nm	3 MB	35 W	1.1 V
i5-3320M	2.60 GHz	2C/4T	3.30 GHz	32 nm	3 MB	35 W	1.1 V
i5-3360M	2.80 GHz	2C/4T	3.50 GHz	32 nm	3 MB	35 W	1.1 V
i5-2450M	2.50 GHz	2C/4T	3.20 GHz	32 nm	3 MB	35 W	1.1 V
i7-3520M	2.90 GHz	2C/4T	3.60 GHz	32 nm	4 MB	35 W	1.1 V
i7-3612QM	2.10 GHz	2C/4T	3.40/3.5 GHz	32 nm	6 MB	35 W	1.1 V

Heat Sink Fan True Value Table

CPU Temperature	Fan Speed (RPM)	SPL Spec (dBA)
43	2700	28
49	3200	31
62	3600	34
82	4100	37
90	4600	40
Throttling 50%: On = 103°C; Off = 97°C		
OS shuts down at 104°C; Hardware shuts down at 85°C		

System Memory

Item	Specification
Memory controller	Integrated in the Intel® Core™ Mobile Processor
Memory size	1-, 2-, or 4 GB
Number of DIMM socket	2
Maximum memory size per socket	4 GB
Maximum system memory size	8 GB
DIMM type	DDR3 SDRAM
DIMM speed	1333/1600 MHz
DIMM voltage	1.5 V
DIMM package	204-pin SO-DIMM

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Memory Combinations

Slot 1 (MB)	Slot 2 (MB)	Total Memory (MB)
1024	0	1024
1024	1024	2048
1024	2048	3072
1024	4096	5120
2048	0	2048
2048	1024	3072
2048	2048	4096
2048	4096	6144
4096	0	4096
4096	1024	5120
4096	2048	6144
4096	4096	8192

NOTE:
The preceding table lists possible system memory configurations. The configuration of slot 1 and slot 2 could be reversed.

Graphics Controller

Item	Specification	Specification
System model	P633V	P633M
Chipset	Intel® HD Graphics 3000/4000 integrated in the Intel® Core™ Mobile Processor	Intel® HD Graphics 3000/4000 integrated in the Intel® Core™ Mobile Processor

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

System BIOS

Item	Specification
BIOS vendor	Phoenix
BIOS version	v1.04
BIOS ROM type	Hardware
BIOS ROM size	4 MB
Protocols supported	• Legacy BIOS and EFI architectures • ACPI 3.0b compliance • PXE specification v2.1 • SMBIOS reference specification v2.5 or later • USB specification revision 1.1, 2.0. and 3.0 • ASF specification v2.0 or later • PCI Express base specification revision 2.1 • PCI BIOS specification revision 2.1 • BIOS Boot specification v1.01 • Simple boot flag specification v2.1 • System management bus specification v2.0 • AHCI support • Microsoft XP/Vista/Windows 7 logo program • Microsoft SLP 1.0 support • Microsoft OA 2.0 and 2.1 support

Keyboard

Item	Specification
Type	Acer FineTouch™ keyboard
Total number of keys	88-/89-/93-keys
Windows logo key	Yes
Internal and external USB keyboard work simultaneously?	Yes
Features	• Overlay numeric keys • Inverted “T” cursor keys • Hotkeys for volume and brightness level, media playback, wireless and sleep functions, and display and touchpad toggle • Windows and Application keys • Multilanguage support configurable by OEM customer

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Hard Disk Drive

Item	Specification	
Vendor and models	Western Digital WD3200LPVT-22G33T0, Hitachi HTS543232A7A384/ HTS545032A7E380/ HTS723232A7A364	Hitachi HTS545050A7E380, Western Digital WD5000LPVT-22G33T0
Product series	• Hitachi Eagle/Jaguar • Western Digital Scorpio Black/Blue	
Configuration		
Interface	SATA, Third Generation	
Form factor	2.5-inch	
Capacity (GB)	320	500
Bytes per sector	512	512
Data heads	n/a	4/n/a, n/a
Disks	n/a	2/n/a, n/a
Performance		
Data buffer	8	8
Spindle speed (RPM)	5400	
Media data transfer rate (Mbits/sec, max)	1245/1245, n/a/n/a	875/996, n/a
Interface transfer rate (MB/sec, max)	300	
Power		
Requirement	5 VDC	

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

SSD Drive

Item	Specification	
Vendor and models	Lite-On LMT-128M3M Synnex SD5SF2-128G	Lite-On LMT-256M3M Synnex SD5SF2-256G
Configuration		
Interface	SATA, Third Generation	
Form factor	2.5-inch	
Capacity (GB)	128	256
Seq. Read (MB/s)	520	520
Seq. Write	330	430
Ran. Read Speed (IOPS 4K)	75,000	49,000
Ran. Write Speed (IOPS 4K)	70,000	28,000
Power		
Requirement	5 VDC	

Card Reader

Item	Specification
Controller	Realtek RTS5209
Cards supported	• MultiMediaCard™ (MMC) • Secure Digital™ (SD) • xD-Picture Card™ (xD) • Memory Stick™ (MS) • Memory Stick PRO™ (MS PRO) cards
Manufacturing technology	65 nm

LCD Panel

Item	Specification
Vendor and models	AUO B133XW03 V3
Screen size (diagonal)	337.82 mm (13.3 in)
Active area	293.4 x 165 mm
Display resolution (pixels)	HD (1366×768)
Pixel pitch	0.215 mm
Viewing angle (H/V)	90 / 60
Brightness	200 nit
Contrast ratio	500:1

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Item	Specification
Response time Typical Maximum	 8 ms 16 ms
Typical power consumption (watt)	3.3 W
Electrical interface	1-channel LVDS
Backlight	White LED (WLED)
Weight	310 g
Physical size	306.8 × 189.2 × 3.6 mm

Supported LCD Resolutions

Resolution	16 bits	32 bits	Intel
800x600, 60 Hz 16:9	Y	Y	Y
1024x768, 60 Hz 16:9	Y	Y	Y
1280x600, 60 Hz 16:9	Y	Y	Y
1280x720, 60 Hz 16:9	Y	Y	Y
1280x768, 60 Hz 16:9	Y	Y	Y
1360x768, 60 Hz 16:9	Y	Y	Y
1366x768, 60 Hz, 16:9	Y	Y	Y

Supported GPU Resolutions

Resolution	16 bits	32 bits	Intel
800x600, 60 Hz 16:9	Y	Y	Y
1024x768, 60 Hz 16:9	Y	Y	Y
1280x600, 60 Hz 16:9	Y	Y	Y
1280x720, 60 Hz 16:9	Y	Y	Y
1280x768, 60 Hz 16:9	Y	Y	Y
1360x768, 60 Hz 16:9	Y	Y	Y
1366x768, 60 Hz, 16:9	Y	Y	Y

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Audio Codec

Item	Specification
Controller	Conexant CX-20584 audio codec
Features	Acoustic Echo Cancellation (AEC), Noise Suppression (NS), and Beam Forming (BF) technologies for voice application

Audio Interface

Item	Specification
Controller	Conexant CX-20584 audio codec
Audio onboard	Yes
Audio channel	Stereo
Resolution	18 bit stereo full duplex
Compatibility	High Definition Audio Specification
Sampling rate	1 Hz resolution VSR (Variable Sampling Rate)
Internal microphone	Yes
Internal speaker/quantity	Yes, two speakers

Webcam

Item	Specification
Vendor and models	• Chicony CH_OV9726_AU/CH_HN162_SP • Lite-On LT_OV9726_SP/LT_HN162_AU • Suyin SY_OV9726_AU/SY_HN162_RT
Resolution	1280 x 1024 resolution

LAN

Item	Specification	Specification
System model	P633V	P633M
LAN controller	Intel® 82579LM	Broadcom NetLink® BCM57761
LAN connector type	RJ-45	RJ-45
LAN connector location	Right side	Right side

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Item	Specification	Specification
Features	• 10/100/1000BASE-T triple-speed MAC • Compliant with IEEE standards • Compliant with IEEE 802.3az draft standard for Energy Efficient Ethernet™ (EEE) • ACPI-compliant Wake on LAN support • Intel Active Management Technology support	• 10/100/1000BASE-T triple-speed media access controller (MAC) • Compliant with IEEE standards • Compliant with IEEE 802.3az draft for Energy Efficient Ethernet™ (EEE) • State-of-the-art physical layer interface that exceeds IEEE requirements • Jumbo frame support with up to 9.6 KB frame size • EthernetAV protocols with IEEE 802.1AS, 1588-2008, IEEE P802.1Qat, and IEEE P802.1Qav support

Wireless LAN

Item	Specification
Module	• Intel Centrino Advanced-N 6235 • Foxconn 3rd WiFi 2x2 AGN+ BT4.0 Broadcom 43228+20702 • Foxconn 3rd WiFi 2x2 AGN+ BT4.0 Atheros WB222 • Liteon 3rd WiFi 2x2 AGN+ BT4.0 Atheros WB222
Frequency band	
Protocols and data rates supported	802.11a/b/g/n – up to 300 Mbps
Interface	PCI Express
Form factor	Compact Half-Mini Card
Antennae	Yes, two routed in the display assembly

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

USB Interface

Item	Specification	
System model	P63V	P63M/P63MG
Core logic	Integrated in Mobile Intel® QM77 Express Chipset	Integrated in Mobile Intel® HM77 Express Chipset
Number and location of USB port	• USB 2.0 – One (right side, supports eSATA device) • USB 3.0 – Three (two left side and one right side)	
EHCI	2	
Output current	1.0A for each connector	

HDMI Port

Item	Specification
Compliance level	HDMI 1.4a
Data throughput	Up to 16.7 million colors
Number of HDMI port	1
Location	Left side

Expansion Card

Item	Specification
Form factor	PCI Express Mini Card
Number of slot	2
Supported card	WLAN, WiMAX, WWAN module

System LED Indicators

Item	Specification
Power status	• Solid blue: The computer is turned on. • Blinking amber: The computer is in power-saving mode. • Indicator off: The computer is turned off.
Battery status	AC adapter connected: • Solid blue: The battery charge is at full capacity. • Solid amber: Battery charging. • Blinking amber: Battery is in abnormal stop charge or battery is in low power state. AC adapter disconnected: • Blinking amber: Battery charge is in critically low state • Indicator off: Discharging state.
HDD activity	Flashes blue when there is hard drive activity.
Wireless connectivity	Flashes blue when there is an active wireless connection.

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Battery Pack

Item	Specification
Vendor and models	• SANYO AS2009B Li-Ion 4S1P • PANASONIC AS10I Li-Ion 4S2P
Battery type	Lithium-ion
Pack capacity	• 4 cell: 2960 mAH • 8 cell: 6000 mAH
Number of battery cell	4 or 8
Package configuration	3S2P

AC Adapter

Item	Specification
Input rating	65 W
Input AC current (max)	100-240 V, 1.5 A, 50-60 Hz
Output	19 V, 3.42A

System Power Management

Item	Specification
Power management system	ACPI 3.0-compliant
Power global states	• G3 Mechanical Off - This off state is entered through a mechanical means; no electrical current is running through the circuitry and it can be worked on without damaging the hardware or endangering service personnel. Except for the real-time clock, power consumption is zero. • G2/S5 Soft Off - OS initiated shutdown. The computer consumes a minimal amount of power. No user mode or system mode code is run. It is not safe to disassemble the machine in this state. • G1 Sleeping - The computer consumes a small amount of power, user mode threads are not being executed, and the system “appears” to be off. It is not safe to disassemble the machine in this state • G0 Working - The computer dispatches user mode (application) threads and they execute. It is not safe to disassemble the machine in this state. • S4 Non-Volatile Sleep - Also known as hibernation state. A special global system state that allows system context to be saved and restored (relatively slowly) when power is lost to the mainboard. It is not safe to disassemble the machine in this state.

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

System DMA Specification

Legacy Mode	Power Management
DMA0	Free
DMA1	Free
DMA2	Free
DMA3	Free
DMA4	Direct Memory Access Controller
DMA5	Free
DMA6	Free
DMA7	Free

System Interrupt Specification

Hardware IRQ	System Function
IRQ0	System timer
IRQ1	Standard PS/2 keyboard
IRQ2	Not in use
IRQ3	Not in use
IRQ5	Not in use
IRQ6	Not in use
IRQ7	Not in use
IRQ8	System CMOS/real time clock
IRQ9	Not in use
IRQ10	Not in use
IRQ11	Not in use
IRQ12	Synaptics PS/2 port touchpad
IRQ13	Numeric data processor
IRQ14	Not in use
IRQ15	Not in use

System IO Address Map

I/O address (hex)	System Function (shipping configuration)
0000 - 001F	Direct Memory Access controller
0000 - 0CF7	PCI bus
0020 - 0021	Programmable Interrupt Controller
0024 - 0025	Programmable Interrupt Controller

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

I/O address (hex)	System Function (shipping configuration)
0028 - 0029	Programmable Interrupt Controller
002C - 002D	Programmable Interrupt Controller
002E - 002F	Motherboard resources
0030 - 0031	Programmable Interrupt Controller
0034 - 0035	Programmable Interrupt Controller
0038 - 0039	Programmable Interrupt Controller
003C - 003D	Programmable Interrupt Controller
0040 - 0043	System timer
004E - 004F	Motherboard resources
0050 - 0053	System timer
0060 - 0060	Standard PS/2 keyboard
0061 - 0061	Motherboard resources
0062 - 0062	Microsoft ACPI-compliant embedded controller
0063 - 0063	Motherboard resources
0064 - 0064	Standard PS/2 keyboard
0065 - 0065	Motherboard resources
0066 - 0066	Microsoft ACPI-compliant embedded controller
0067 - 0067	Motherboard resources
0068 - 006F	Motherboard resources
0070 - 0070	Motherboard resources
0070 - 0077	System CMOS/real time clock
0080 - 0080	Motherboard resources
0081 - 0091	Direct Memory Access controller
0092 - 0092	Motherboard resources
0093 - 009F	Direct Memory Access controller
00A0 - 00A1	Programmable Interrupt Controller
00A4 - 00A5	Programmable Interrupt Controller
00A8 - 00A9	Programmable Interrupt Controller
00AC - 00AD	Programmable Interrupt Controller
00B0 - 00B1	Programmable Interrupt Controller
00B2 - 00B3	Motherboard resources
00B4 - 00B5	Programmable Interrupt Controller
00B8 - 00B9	Programmable Interrupt Controller

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

I/O address (hex)	System Function (shipping configuration)
00BC - 00BD	Programmable Interrupt Controller
00C0 - 00DF	Direct Memory Access controller
00F0 - 00F0	Numeric data processor
03B0 - 03BB	Intel® HD Graphics Family
03C0 - 03DF	Intel® HD Graphics Family
0400 - 0453	Motherboard resources
0454 - 0457	Motherboard resources
0458 - 047F	Motherboard resources
04D0 - 04D1	Programmable Interrupt Controller
0500 - 057F	Motherboard resources
0D00 - FFFF	PCI bus
1000 - 100F	Motherboard resources
2000 - 2FFF	Intel® 6 series /C200 Series Chipset Family PCI Express Root Port 8 -1C1E
3000 - 303F	Intel® HD Graphic Family
3060 - 307F	Intel® Mobile Express Chipset SATA AHCI Controller
30A0 - 30A7	Intel® Mobile Express Chipset SATA AHCI Controller
30A8 - 30AF	Intel® Mobile Express Chipset SATA AHCI Controller
30B0 - 30B7	Intel® Active Management Technology - SOL (COM3)
30B8 - 30BB	Intel® Mobile Express Chipset SATA AHCI Controller
30BC - 30BF	Intel® Mobile Express Chipset SATA AHCI Controller
EFA0 - EFBF	Intel® 6 Series/C200 Series Chipset Family SMBus Controller - 1C22
FFFF - FFFF	Motherboard resources

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

CHAPTER 2

System Utilities

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

BIOS Setup Utility 2-3
Navigating the BIOS Utility 2-3

BIOS Flash Utilities 2-12
WinFlash Utility 2-13

Remove HDD/BIOS Password Utilities 2-14
Removing the HDD Password 2-14
Removing the BIOS Passwords 2-15
Using DMI Tools 2-16
LAN EEPROM Utility 2-16

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

System Utilities

BIOS Setup Utility

This utility is a hardware configuration program built into a computer's BIOS (Basic Input/Output System).

The utility is pre-configured and optimized so most users do not need to run it. If configuration problems occur, the setup utility may need to be run. Refer to *Chapter 4, Troubleshooting* when a problem arises.

To enter this the utility, during POST (power-on self-test), press ***F2*** when the prompt appears on the bottom of screen.

The default setting of the `F12 Boot Menu` is `Disabled`. To change the boot device without entering the *BIOS Setup Utility*, set the parameter to `Enabled`. During the next POST, press ***F12*** to enter the `multi-boot` menu.

Navigating the BIOS Utility

The *BIOS Setup Utility* has five menu options, namely:

- Information
- Main
- Security
- Boot
- Exit

Perform the following actions to navigate through the *BIOS Setup Utility*:

- Press the ◁ ▷ to select items in the menu bar.
- Press △ ▽ to select an item in the menu screen or in an option box.
- Press ***F5*** or ***F6*** to change the parameter value.
- Press ***Esc*** to exit from the *Setup Utility*.
- Press ***F9*** to load the default settings.
- Press ***F10*** to save changes and exit from the *Setup Utility*.

NOTE:

Parameter values enclosed in square brackets [ ] can be change. Navigation keys appear on the bottom of the screen. Read the item specific help on the right area of the screen before making changes to the parameter values.

NOTE:

System information can vary depending on the computer model.

HTTP://MYCOMP.SU/... Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

BIOS Menus

This section describes the *Phoenix SecureCore Tiano BIOS Setup Utility* menu tabs.

NOTE:

The screenshots used in this chapter are for reference only. Actual values can vary depending on the computer model.

Information

This tab shows a summary of the computer's hardware information.

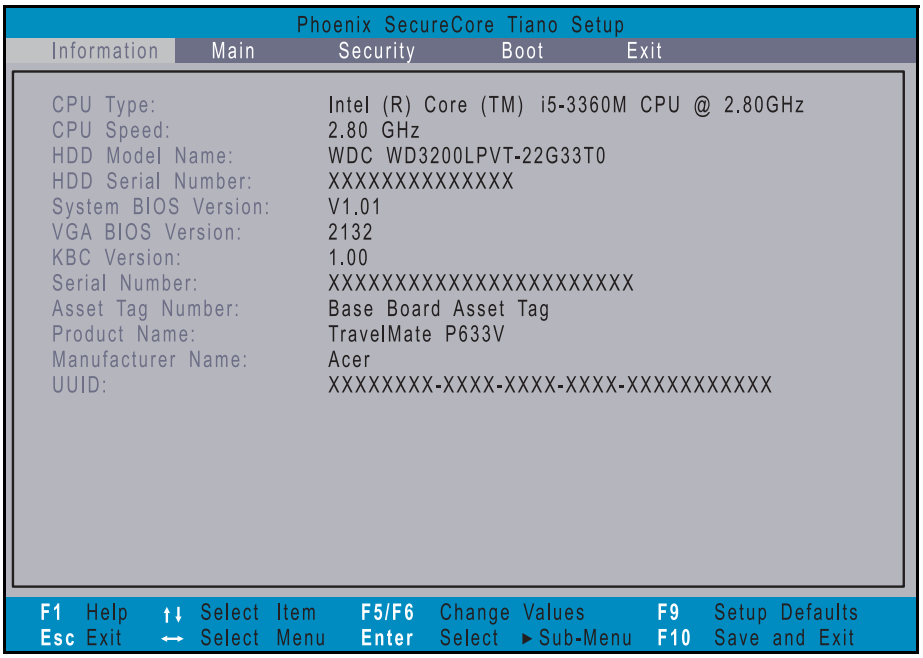

Phoenix SecureCore Tiano Setup
Information
Main
Security
Boot
Exit
CPU Type: Intel (R) Core (TM) i5-3360M CPU @ 2.80GHz
CPU Speed: 2.80 GHz
HDD Model Name: WDC WD3200LPVT-22G33T0
HDD Serial Number: XXXXXXXXXXXXX
System BIOS Version: V1.01
VGA BIOS Version: 2132
KBC Version: 1.00
Serial Number: XXXXXXXXXXXXXXXXXXXXX
Asset Tag Number: Base Board Asset Tag
Product Name: TravelMate P633V
Manufacturer Name: Acer
UUID: XXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXX
F1 Help ↑↓ Select Item F5/F6 Change Values F9 Setup Defaults
Esc Exit ↔ Select Menu Enter Select ▸Sub-Menu F10 Save and Exit

Figure 2-1. Hardware Information

Table 2-1. Hardware Information

Parameter	Description
CPU Type	Model name and core frequency of the installed processor
CPU Speed	Core frequency of the installed processor
HDD Model Name	Model name of the installed hard drive
HDD Serial Number	Serial number of the installed hard drive
System BIOS Version	Current system BIOS version
VGA BIOS Version	Current firmware version of the system VGA
KBC Version	Current keyboard controller version
Serial Number	Serial number of the computer
Asset Tag Number	Asset tag number of the computer

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Table 2-1. Hardware Information (Continued)

Parameter	Description
Product Name	Model name of the computer
Manufacturer Name	Computer manufacturer
UUID	The universally unique identifier tag assigned to the computer

Main

Use this tab to set the system time and date, enable or disable boot options, and enable or disable the D2D recovery feature.

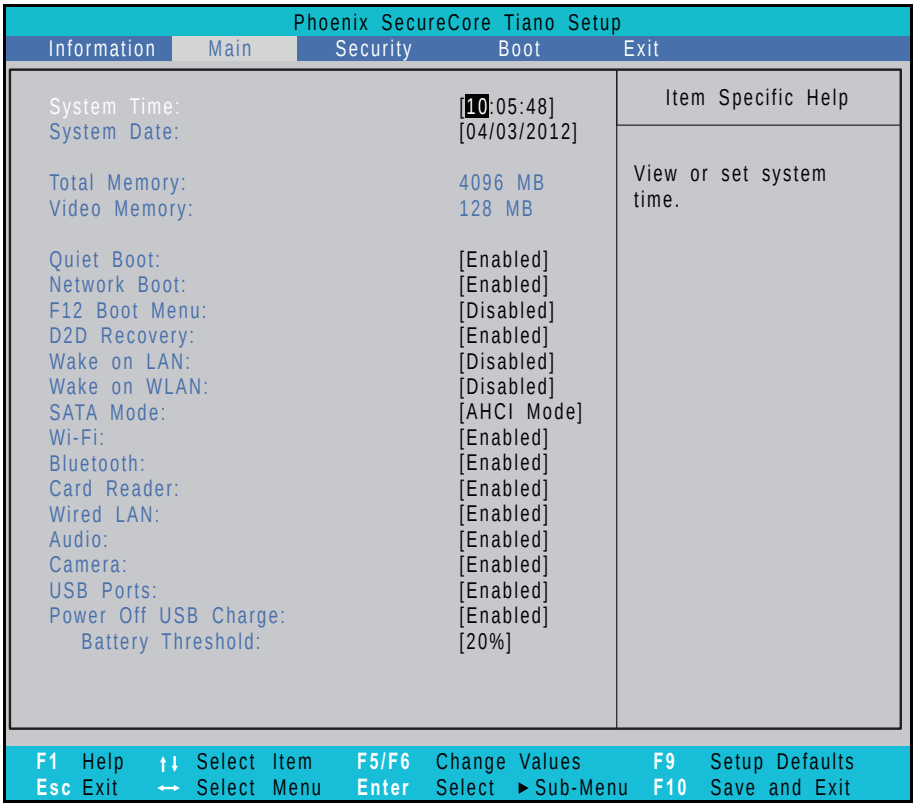


Figure 2-2. BIOS Main.

Table 2-2. BIOS Main

Parameter	Description	Format/Option
System Time	System time expressed in 24-hour format	Format: HH:MM:SS (hour:minute:second)
System Date	System date	Format MM/DD/YYYY (month/day/year)
Total Memory	Total system memory available	–
Video Memory	System memory allocated for graphics processing	–

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Table 2-2. BIOS Main (Continued)

Parameter	Description	Format/Option
Graphic Mode	Option to set the graphic device.	Option: Switchable, Integrated or Discrete
Quiet Boot	Show the original equipment manufacturer (OEM) screen during system boot instead of the typical POST screen	Option: Enabled or Disabled
Network Boot	Option to boot system from LAN	Option: Enabled or Disabled
F12 Boot Menu	Option to enter the *Boot* menu during POST	Option: Enabled or Disabled
D2D Recovery	Option to use the *D2D Recovery* function	Option: Enabled or Disabled
Wake on LAN	Option to enable the wake on LAN feature.	Option: Enabled or Disabled
Wake on WLAN	Option to enable the wake on WLAN feature.	Option: Enabled or Disabled
SATA Mode	Option to set the SATA controller mode	Option: AHCI or IDE
WiFi	Option to enable the Wi-Fi device.	Option: Enabled or Disabled
Bluetooth	Option to enable the Bluetooth device.	Option: Enabled or Disabled
Card Reader	Option to enable the multi-function card reader device.	Option: Enabled or Disabled
Wired LAN	Option to enable the wired LAN device.	Option: Enabled or Disabled
Audio	Option to enable the audio device.	Option: Enabled or Disabled
Camera	Option to enable the camera device.	Option: Enabled or Disabled
USB Ports	Option to enable the external USB ports.	Option: Enabled or Disabled
Power Off USB Charge (S3/S4/S5)	Option to enable the system to charge USB devices while the system enters into Suspend to RAM (S3), Hibernation (S4), or power off (S5) mode.	Option: Enabled or Disabled
Battery Threshold (in DC mode)	Option to set battery threshold.	Option: 10%, 20% or 30%

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Security

Use this tab to safeguard and protect the computer from unauthorized use.

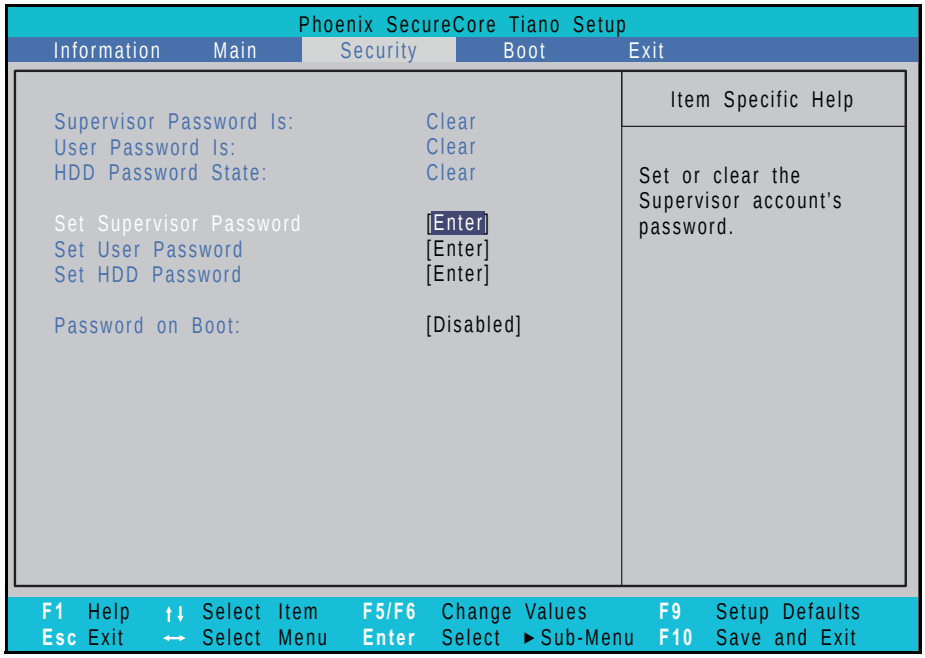

Phoenix SecureCore Tiano Setup
Information
Main
Security
Boot
Exit
Item Specific Help
Supervisor Password Is: Clear
User Password Is: Clear
HDD Password State: Clear
Set Supervisor Password [Enter]
Set User Password [Enter]
Set HDD Password [Enter]
Password on Boot: [Disabled]
Set or clear the Supervisor account's password.
F1 Help ↑↓ Select Item F5/F6 Change Values F9 Setup Defaults
Esc Exit ↔ Select Menu Enter Select ▸Sub-Menu F10 Save and Exit

Figure 2-3. BIOS Security

Table 2-3. BIOS Security

Parameter	Description	Option
Supervisor Password Is	Supervisor password setting	Clear or Set
User Password Is	User password setting	Clear or Set
HDD Password State	Hard drive password setting	Clear or Set
Set Supervisor Password	Option to set the supervisor password	–
Set User Password	Option to set a user password	–
Set HDD Password	Option to set the hard drive password	–
Password on Boot	Option to enable password requirement during system boot	Enabled or Disabled

NOTE:

When prompted to enter the password, three attempts are allowed before system halts. Resetting the BIOS password may require the user to return the computer to its dealer.

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Setting a Password

Follow the succeeding instructions to set the user or supervisor passwords.

1. Press △▽ to highlight a `Set _____ Password` parameter and press ***Enter***. The `Set _____ Password` dialog box appears.

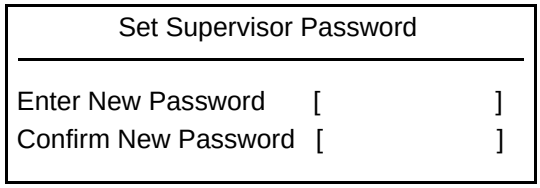


Figure 2-4. Set Supervisor Password

2. Type a new password in the `Enter New Password` field and press ***Enter***. Passwords are not case sensitive and the length must not exceed eight alphanumeric characters (A-Z, a-z, 0-9).
3. Retype the password in the `Confirm New Password` field and press ***Enter***.

+ IMPORTANT:

Use care when typing a password. Characters do not appear on the screen.

4. Press ***Enter***.

⇛ NOTE:

Users can choose to enable the `Password on Boot` parameter.

5. Press ***F10*** to save changes and exit from the *BIOS Setup Utility*.

Removing a Password

Perform the following:

1. Press △▽ to highlight a `Set _____ Password` parameter and press ***Enter***. The `Set _____ Password` dialog box appears.

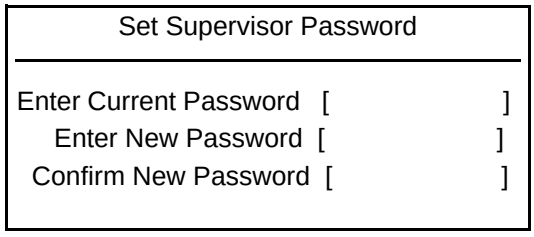


Figure 2-5. Set Supervisor Password

2. Type the current password in the `Enter Current Password` field and press ***Enter***.
3. Press ***Enter*** twice without typing anything in the `Enter New Password` and `Confirm New Password` fields.
4. Press ***F10*** to save changes and exit from the *BIOS Setup Utility*.

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Changing a Password

1. Press △▽ to highlight a `Set _____ Password` parameter and press ***Enter***. The `Set _____ Password` dialog box appears.

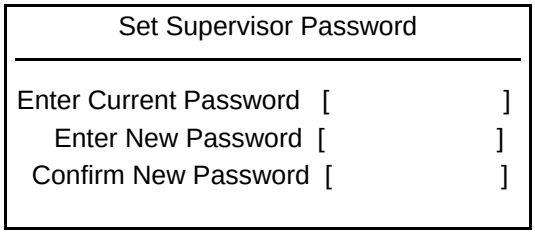


Figure 2-6. Set Supervisor Password

2. Type the current password in the `Enter Current Password` field and press ***Enter***.
3. Type the new password in the `Enter New Password` field.
4. Retype the password in the `Confirm New Password` field.

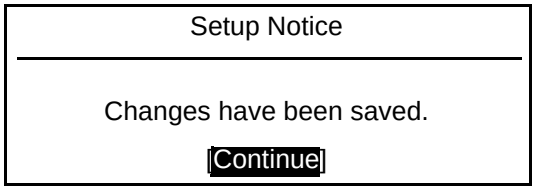


Figure 2-7. Setup Notice

5. Press ***Enter***. Computer sets `Supervisor Password` parameter to `Set`.

NOTE:

Users can choose to enable the `Password on Boot` parameter.

6. Press ***F10*** to save changes and exit from the *BIOS Setup Utility*.

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Boot

Use this tab to set the preferred drive sequence in which the *Setup Utility* attempts to boot the operating system. By default, the computer searches for boot devices in the following order:

1. Hard disk drive 0
2. External USB hard drive
3. Hard disk drive 1
4. Optical disc drive
5. External USB bootable device
6. Network boot
7. External USB optical drive

Press △▽ to select a device and press ***F5*** or ***F6*** to move it up or down the list.

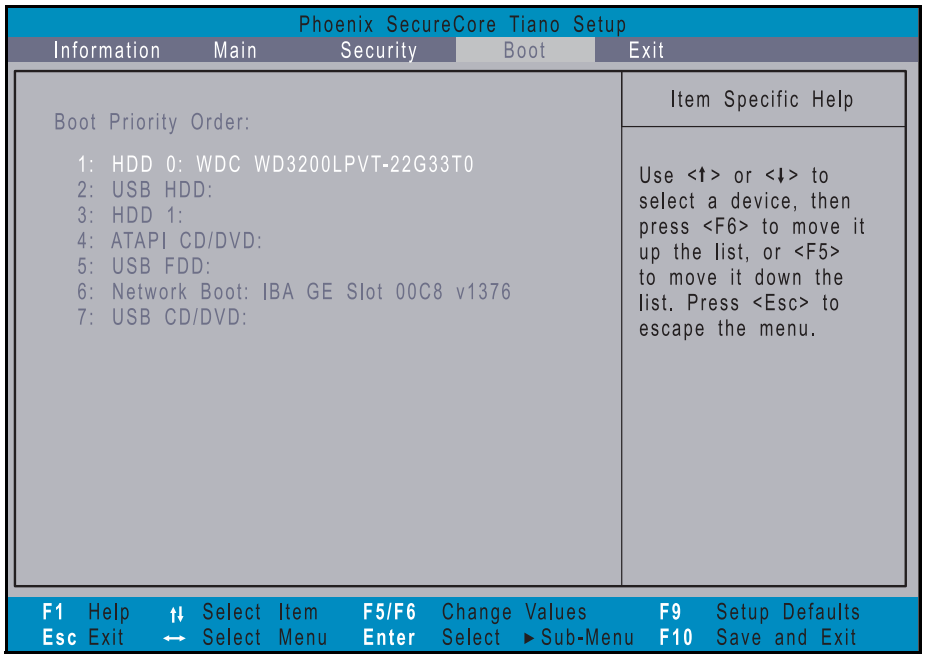

Phoenix SecureCore Tiano Setup
Information
Main
Security
Boot
Exit
Boot Priority Order:
1: HDD 0: WDC WD3200LPVT-22G33T0
2: USB HDD:
3: HDD 1:
4: ATAPI CD/DVD:
5: USB FDD:
6: Network Boot: IBA GE Slot 00C8 v1376
7: USB CD/DVD:
Item Specific Help
Use <↑> or <↓> to select a device, then press <F6> to move it up the list, or <F5> to move it down the list. Press <Esc> to escape the menu.
F1 Help ↑↓ Select Item F5/F6 Change Values F9 Setup Defaults
Esc Exit ↔ Select Menu Enter Select ▸Sub-Menu F10 Save and Exit

Figure 2-8. BIOS Boot

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Exit

Use the Exit tab to save or discard changes and close the *BIOS Setup Utility*.

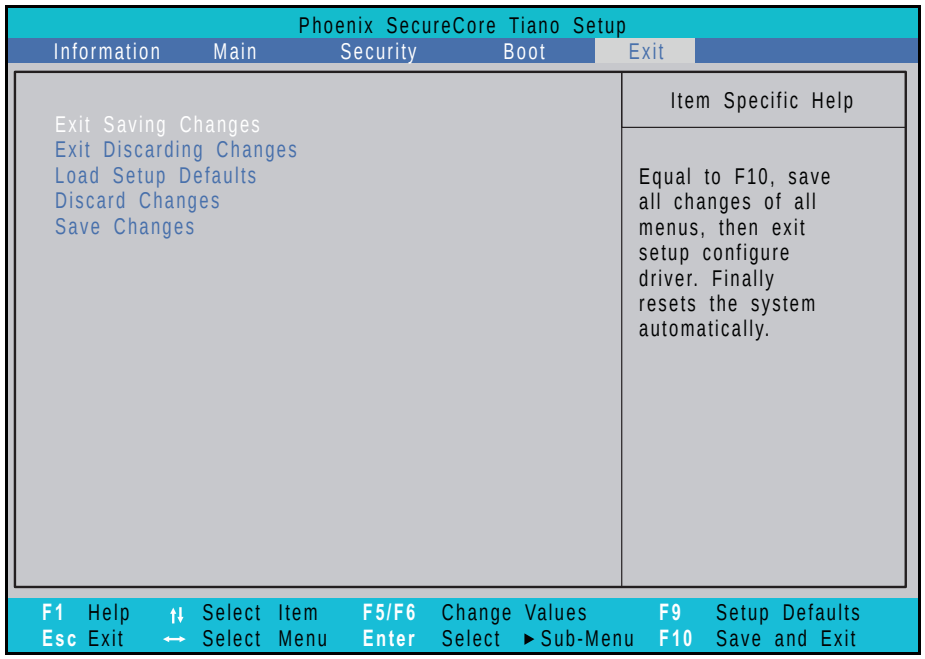


Figure 2-9. BIOS Exit

Table 2-9. Exit Parameters

Parameter	Description
Exit Saving Changes	Close the *BIOS Setup Utility* and save the setup changes.
Exit Discarding Changes	Close the *BIOS Setup Utility* without saving the setup changes.
Load Setup Default	Load the default values for all setup items.
Discard Changes	Load the previous values for all setup items.
Save Changes	Save the setup changes.

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

BIOS Flash Utilities

BIOS Flash memory updates are required for the following conditions:

- New versions of system programs
- New features or options
- Restore a BIOS when it becomes corrupted.

Use the Flash utility to update the system BIOS Flash ROM.

NOTE:
If a Crisis Recovery Disc is not available, create one before Flash utility is used.

NOTE:
Do not install memory related drivers (XMS, EMS, DPMI) when Flash is used.

NOTE:
Use AC adaptor power supply when running Flash utility. If battery pack does not contain power to finish loading BIOS Flash, do not boot system.

Perform the following to run Flash.

1. Rename the BIOS file as “XXXXXXX.FD”.
2. Copy the “XXXXXXX.FD” file to a bootable USB device containing the Crisis Recovery disk files.
3. Turn off the computer.
4. Insert the USB device containing the renamed BIOS file and the Crisis Recovery disk files to any USB port.
5. Press and hold the ***Fn*** + ***Esc*** keys (this is the BIOS recovery hotkey), then press the power button.
6. Release the ***Fn*** + ***Esc*** keys after POST.

NOTE:
Flash utility has auto execution function.

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

DOS Flash Utility

Perform the following to use the *DOS Flash Utility*:

1. Press ***F2*** during boot to enter `Setup Menu`.
2. Select `Boot Menu` to modify boot priority order.

Example: If using USB HDD to Update BIOS, move USB HDD to position 1.

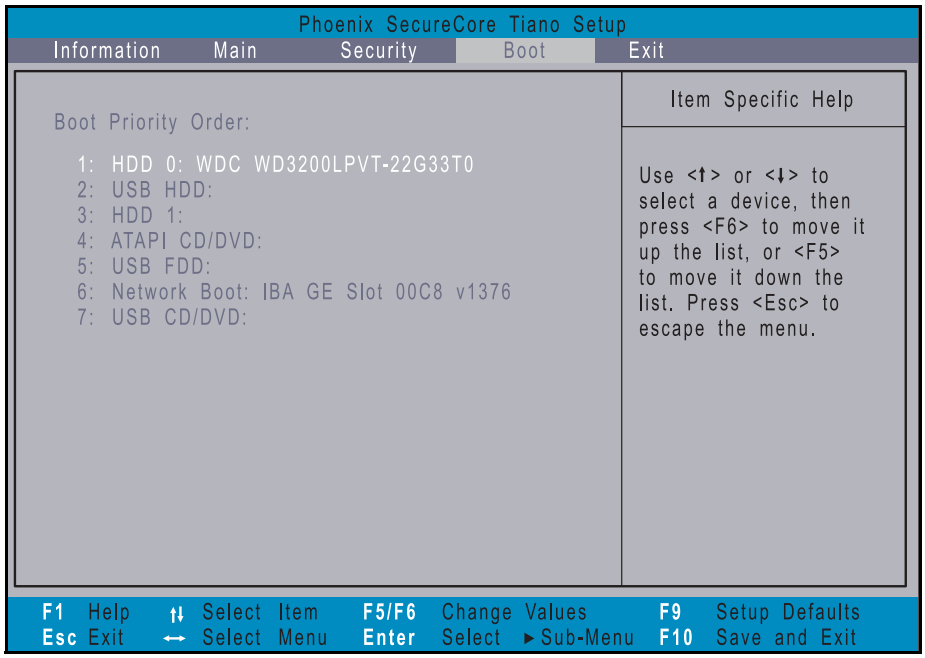

Phoenix SecureCore Tiano Setup
Information
Main
Security
Boot
Exit
Boot Priority Order:
1: HDD 0: WDC WD3200LPVT-22G33T0
2: USB HDD:
3: HDD 1:
4: ATAPI CD/DVD:
5: USB FDD:
6: Network Boot: IBA GE Slot 00C8 v1376
7: USB CD/DVD:
Item Specific Help
Use <↑> or <↓> to select a device, then press <F6> to move it up the list, or <F5> to move it down the list. Press <Esc> to escape the menu.
F1 Help ↑↓ Select Item F5/F6 Change Values F9 Setup Defaults
Esc Exit ↔ Select Menu Enter Select ▸Sub-Menu F10 Save and Exit

Figure 2-10. BIOS Boot

3. Insert the USB HDD and reboot computer.
4. Execute <**BIOS.BAT**> to update BIOS.

WinFlash Utility

Perform the following to use the WinFlash Utility:

1. Double click the WinFlash executable file.
2. Click ***OK*** to begin the update.

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Remove HDD/BIOS Password Utilities

This section explains how to remove the HDD and BIOS passwords.

Removing the HDD Password

NOTE:

If the incorrect HDD password is entered three times in succession, an error is generated. (Figure 2-11)

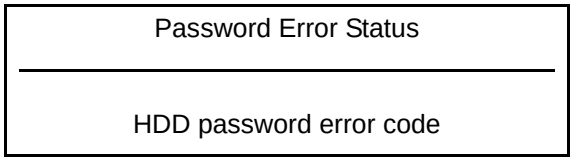


Figure 2-11. Password Error Status

To reset the HDD password:

1. Open the computer in a DOS environment.
2. Type the following command:

```
A\> unlock6 XXXXX 00
```

Figure 2-12. Unlock Key Code

3. Press ***Enter*** to display the command options.

Figure 2-13. Password Encoding

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

4. Select option 2 (upper case ASCII code) and press ***Enter***.
5. Write down the generated master password.
6. Reboot the computer.
7. In the HDD password prompt, type the master password generated in step 5, then press ***Enter***.

Removing the BIOS Passwords

To clear a lost BIOS password (user or supervisor password), you need to short the clear password hardware gap (G2201) located on the mainboard. Refer to the "Clearing the BIOS Passwords" on page 5-5 section for detailed instructions.

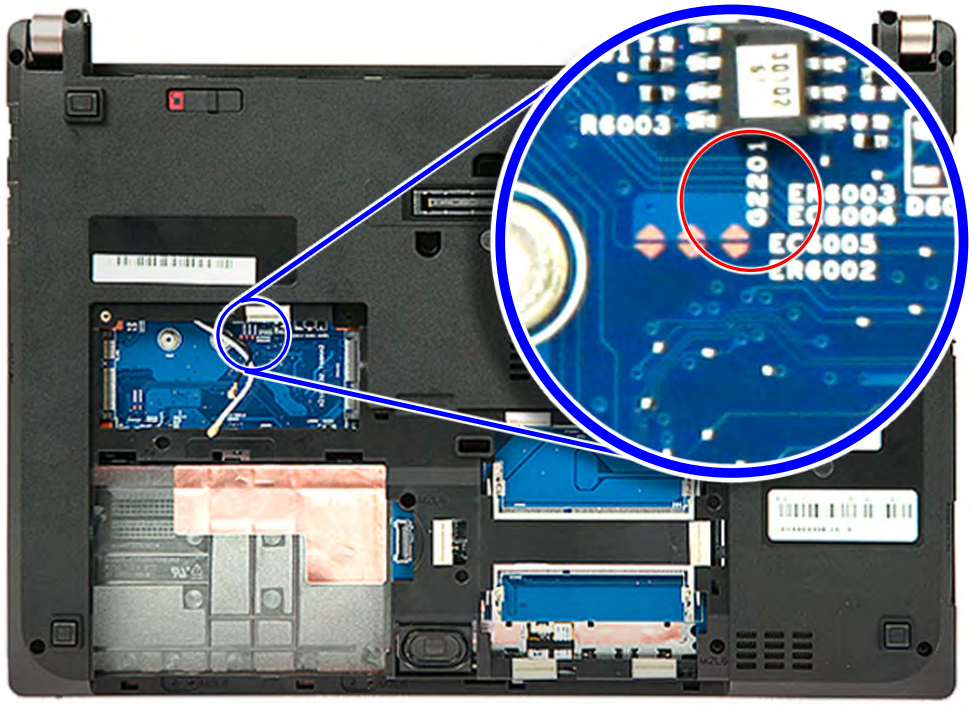


Figure 2-14. G2201 Hardware Gap

HTTP://MYCOMP.SU/... Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Using DMI Tools

The *DMI* (Desktop Management Interface) *Tool* copies BIOS information to EEPROM (Electrically Erasable Programmable Read-Only Memory). Used in the DMI pool for hardware management.

LAN EEPROM Utility

LAN EEPROM Utility enables to change the MAC address.

Perform the following steps to use the LAN EEPROM Utility:

1. Create a DOS bootable USB HDD.
2. Copy the contents of the MAC folder to the HDD and remove the HDD form the computer.
3. Reboot the computer and press ***F2*** during the boot sequence to enter the setup menu.
4. Select the Boot menu item and move the entry “USB HDD” to the first position.

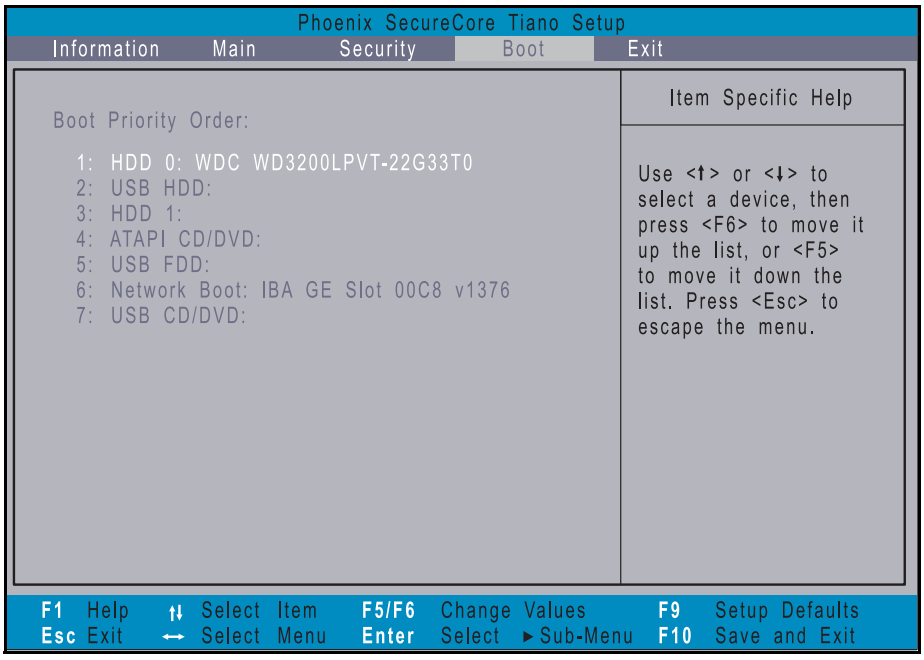

Phoenix SecureCore Tiano Setup
Information
Main
Security
Boot
Exit
Boot Priority Order:
1: HDD 0: WDC WD3200LPVT-22G33T0
2: USB HDD:
3: HDD 1:
4: ATAPI CD/DVD:
5: USB FDD:
6: Network Boot: IBA GE Slot 00C8 v1376
7: USB CD/DVD:
Item Specific Help
Use <↑> or <↓> to select a device, then press <F6> to move it up the list, or <F5> to move it down the list. Press <Esc> to escape the menu.
F1 Help ↑↓ Select Item F5/F6 Change Values F9 Setup Defaults
Esc Exit ↔ Select Menu Enter Select ▸Sub-Menu F10 Save and Exit

Figure 2-15. BIOS Boot

5. Connect the USB HDD and reboot the computer.
6. At the command prompt, navigate to the LAN EEPROM utility folder.
7. Execute the < **MAC.BAT**> file.
8. At prompt type in MAC address.
9. Press ***Enter***.
10. Reboot when the process has completed.

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

CHAPTER 3

Machine Maintenance

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Machine Disassembly and Replacement 3-5
Recommended Equipment 3-5
Replacement Requirements 3-5
Pre-disassembly Instructions 3-6

Disassembly Process 3-7

External Module Disassembly Process 3-8
External Modules Disassembly Flowchart 3-8
Removing the Battery Pack 3-9
Removing the Base Door 3-10
Removing the HDD Module 3-11
Removing the WLAN Module 3-15
Removing the DIMM Modules 3-17
Removing the Keyboard 3-18

Main Unit Disassembly Process 3-20
Main Unit Disassembly Flowchart 3-20
Removing the Palmrest Module/Upper Case 3-21
Removing the Touchpad/Fingerprint Module 3-24
Removing the RF Key Control Module 3-29
Removing the TPM Board 3-30
Removing the Mainboard 3-31
Removing the Thermal Module 3-34
Removing the CPU 3-36
Removing the RTC Battery 3-37
Removing the Speakers 3-38
Removing the DC In Module 3-39
Removing the LCD Module 3-40

LCD Module Disassembly Process 3-42
LCD Module Disassembly Flowchart 3-42
Removing the LCD Bezel 3-43
Removing the LCD Hinges 3-45
Removing the Microphone 3-46
Removing the Camera Board 3-47
Removing the LCD Panel 3-49
Removing the LCD FPC Cable 3-50

LCD Module Reassembly Process 3-52
Replacing the LCD FPC Cable 3-52
Replacing the LCD Panel 3-54
Replacing the Camera Board 3-55

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Replacing the Microphone 3-57
Replacing the LCD Hinges 3-58
Replacing the LCD Bezel. 3-59

Main Unit Reassembly Process 3-61
Replacing the LCD Module 3-61
Replacing the DC In Module 3-63
Replacing the Speakers. 3-64
Replacing the RTC Battery 3-65
Replacing the CPU 3-66
Replacing the Thermal Module 3-67
Replacing the Mainboard. 3-69
Replacing the TPM Board 3-72
Replacing the RF Key Control Board. 3-73
Replacing the Touchpad/Fingerprint Module. 3-74
Replacing the Palmrest Module/Upper Case. 3-79

External Module Reassembly Process 3-82
Replacing the Keyboard 3-82
Replacing the DIMM Modules 3-84
Replacing the WLAN Module. 3-85
Replacing the HDD Module 3-87
Replacing the Base Door. 3-91
Replacing the Battery Pack 3-92

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook.
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Machine Maintenance

Machine Disassembly and Replacement

This document provides step-by-step instructions on how to disassemble the notebook computer for maintenance and troubleshooting.

Cable paths and positioning may not represent the actual model. During the removal and installation of the components, ensure all available cable channels and clips are used and that the cables are replaced in the same position.

The screws for the different components vary in size. During the disassembly process, group the screws with the corresponding components to avoid mismatch when putting back the components.

The product previews seen in the disassembly procedures may not represent the final product color or configuration.

Recommended Equipment

To disassemble the computer, the following tools are suggested:

- Wrist grounding strap and conductive mat for preventing electrostatic discharge
- Non-marring scribe
- Phillips screwdriver
- Flat-blade screwdriver
- Plastic flat screwdriver
- Plastic tweezers
- Cyanoacrylate glue

Replacement Requirements

NOTE:

Cabling and components require adhesive to be applied during the replacement and reassembly process.

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook.
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Pre-disassembly Instructions

Before proceeding with the disassembly procedure, make sure that you do the following:

1. Turn off the power to the system and all peripherals.
2. Unplug the AC adapter and all power and signal cables from the system.

Figure 3-1. AC Adapter

3. Remove any dummy cards that are present.
4. Place the system on a flat, stable surface.

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Disassembly Process

The disassembly process is divided into the following stages:

- External module disassembly
- Main unit disassembly
- LCD module disassembly

The flowcharts provided in the succeeding disassembly sections illustrate the entire disassembly sequence. Observe the order of the sequence to avoid damage to any of the hardware components. For example, if you want to remove the mainboard, you must first remove the keyboard, then disassemble the inside assembly frame in that order.

Table 3-1. Main Screw List

Screw	Quantity	Acer Part Number
M2 × L3	2	86.00H25.523
M2 × L6	23	86.00F58.726
M2 × L3.5	7	86.6A562.3R5
M2 × 2.5	3	86.2A562.2R5
M2 × L2.5	8	86.00D72.620

HTTP://MYCOMP.SU - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook.
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

External Module Disassembly Process

External Modules Disassembly Flowchart

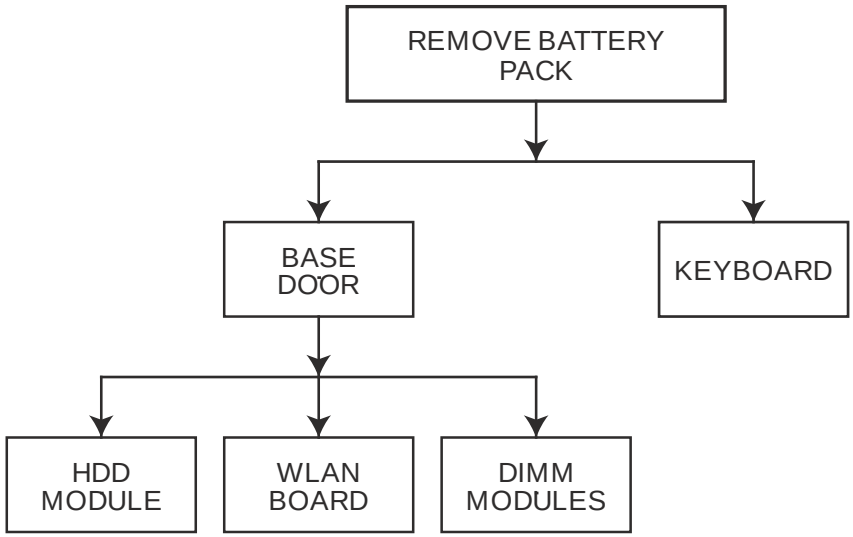


Figure 3-2. External Modules Disassembly Flowchart

Table 3-2. Screw List

Step	Screw	Quantity	Acer Part Number
Base Door Disassembly	M2 × L6	3	86.00F58.726
HDD Bracket Disassembly	M2 × L6	2	86.00F58.726
WLAN Module Disassembly	M2 × L3.5	1	86.6A562.3R5

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook.
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Removing the Battery Pack

1. Turn the computer over so that the base is facing up.
2. Slide the battery lock to the unlock position.

Figure 3-3. Battery Pack

3. Slide and hold the battery release latch (**1**) all the way through to release the battery pack, then detach the battery pack from its bay (**2**).

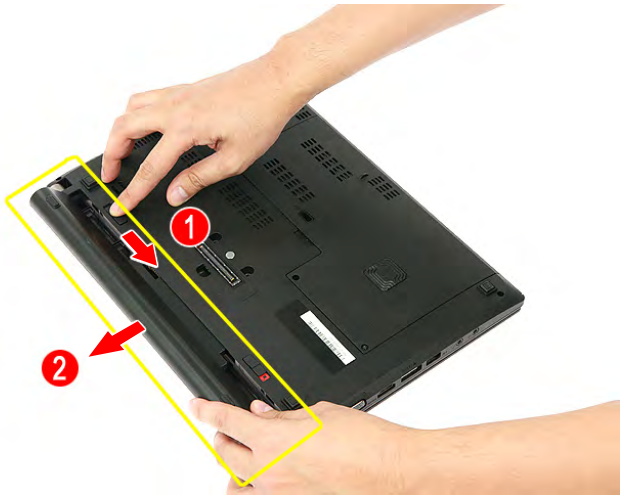


Figure 3-4. Battery Pack

NOTE:

The battery has been highlighted with the yellow rectangle in Figure 3-4. Disconnect the battery and follow local regulations for disposal.

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook.
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Removing the Base Door

1. Perform the “Removing the Battery Pack” procedure described on page 3-9.
2. Remove the three screws securing the base door to the lower case assembly.

Figure 3-5. Base Door Screws

Table 3-5. Screws

Step	Screw	Quantity	Screw Type
Base Door Disassembly	M2 × L6	3	

3. Insert a non-marring plastic scribe on the base door’s notch (**1**) to detach the base door, then lift it off the lower case assembly (**2**).

Figure 3-6. Base Door

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook.
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Removing the HDD Module

1. Perform the “Removing the Base Door” procedure described on page 3-10.
2. Disconnect the HDD cable from the mainboard.

Figure 3-7. HDD Cable

3. Remove the two screws securing the HDD bracket to the lower case assembly.

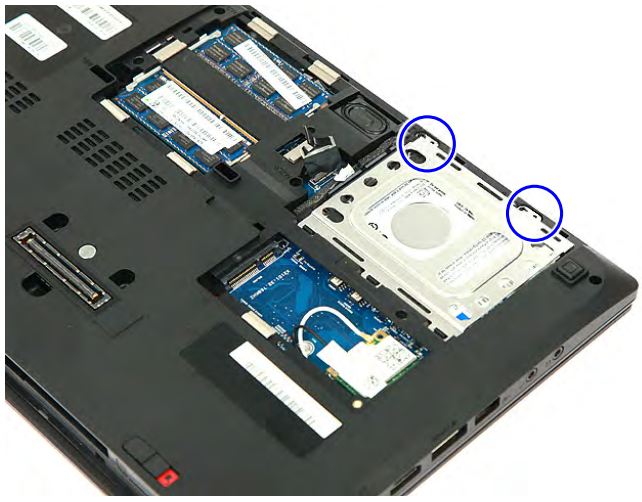


Figure 3-8. HDD Bracket Screws

Table 3-8. Screws

Step	Screw	Quantity	Screw Type
HDD Module Disassembly	M2 × L6	2	

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

4. Tilt the HDD bracket (**1**) then lift it off the lower case assembly (**2**).

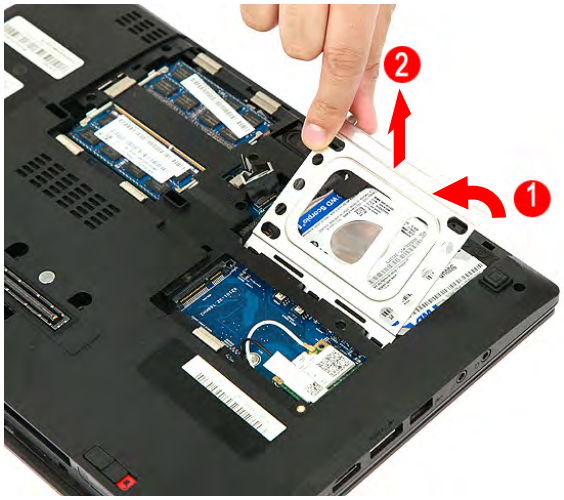


Figure 3-9. HDD Bracket

5. Detach the HDD module from the lower case assembly.

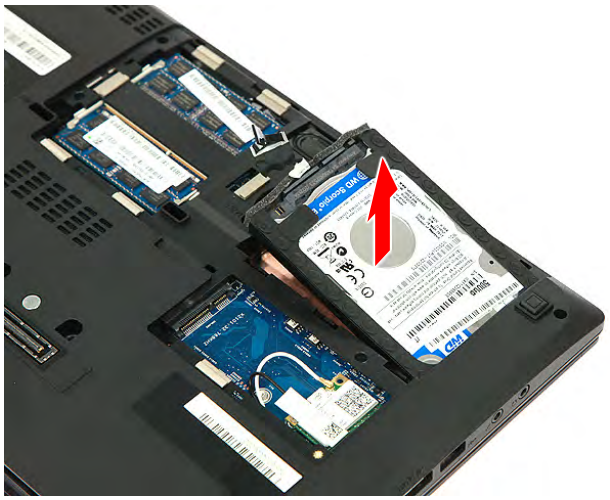


Figure 3-10. HDD Module

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook.
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

6. Release the HDD rubber holder from the self adhesive tape securing it to the HDD.

Figure 3-11. HDD Module Self Adhesive Tape

7. Pry the HDD rubber holder off the HDD (**1**) and then detach the HDD (**2**).

Figure 3-12. HDD Rubber Holder

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

8. Pull the HDD adapter cable off the HDD.

Figure 3-13. HDD Adapter Cable

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook.
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Removing the WLAN Module

1. Perform the “Removing the Base Door” procedure described on page 3-10.
2. Unplug the two antenna cables from the WLAN module.

IMPORTANT:

For reference during machine reassembly, note which cable color corresponds to the main (black) and auxiliary (white) connectors.

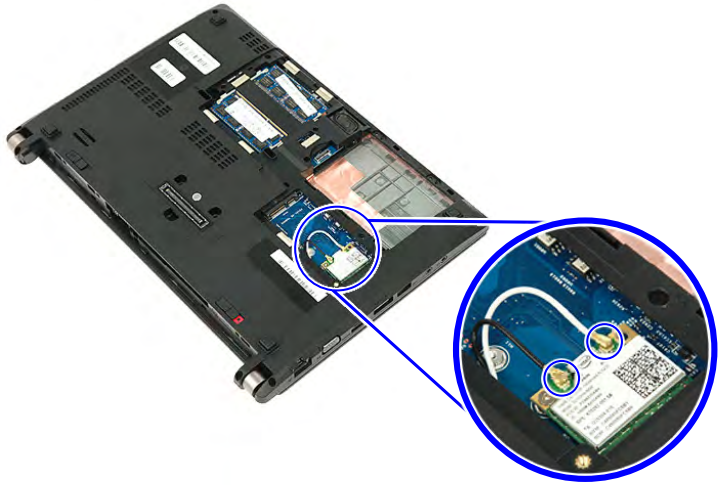


Figure 3-14. WLAN Module Antennas

3. Remove the screw securing the WLAN module to the mainboard.

Figure 3-15. WLAN Module Screw

Table 3-15. Screw

Step	Screw	Quantity	Screw Type
WLAN Module Disassembly	M2 × L3.5	1	

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook.
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

4. Detach the WLAN module from the slot.

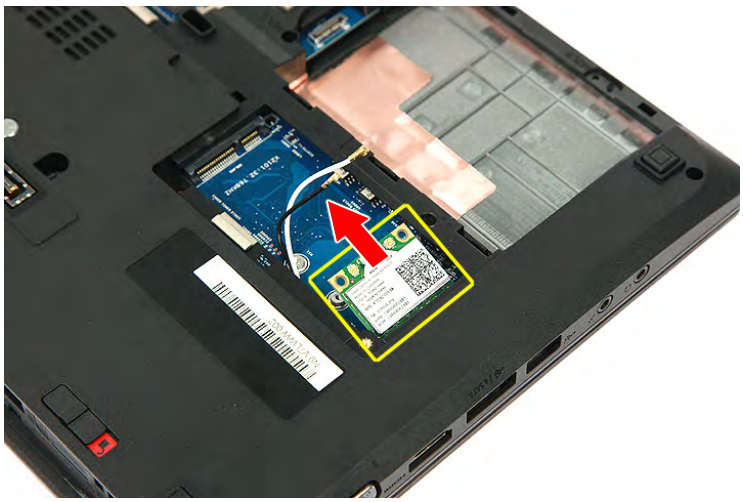


Figure 3-16. WLAN Module

NOTE:

A circuit board that is > 10cm^2 has been highlighted with a yellow rectangle in Figure 3-16. Follow the local regulations for disposing this type of circuit board.

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Removing the DIMM Modules

1. Perform the “Removing the Base Door” procedure described on page 3-10.
2. Push out the latches on both sides of the DIMM slot (**1**) until the DIMM module tilts upward, and then detach the DIMM module from the slot (**2**).

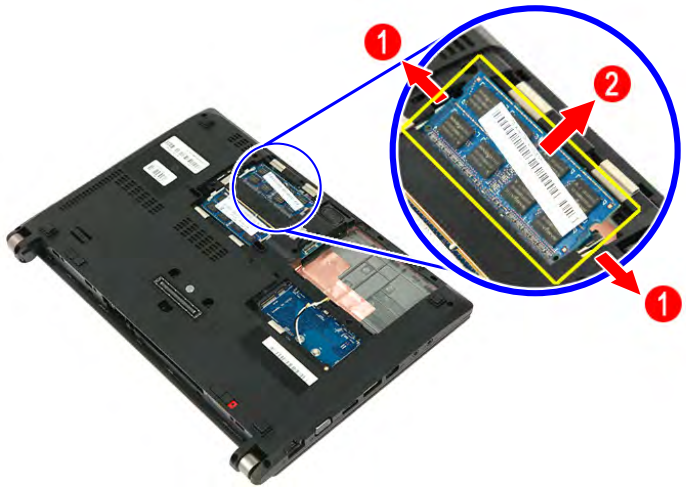


Figure 3-17. DIMM Modules

NOTE:

A circuit board that is > 10cm^2 has been highlighted with a yellow rectangle in Figure 3-17. Follow the local regulations for disposing this type of circuit board.

3. Repeat Step 2 to remove the remaining DIMM module.

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook.
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Removing the Keyboard

IMPORTANT:

The keyboard is easily warped or damaged during the removal process. Take care not to use excessive force when removing.

1. Perform the “Removing the Battery Pack” procedure described on page 3-9.
2. Turn the computer over and open the LCD panel.
3. Use a non-marring plastic flat-blade screwdriver to push the latches on the top side of the keyboard.

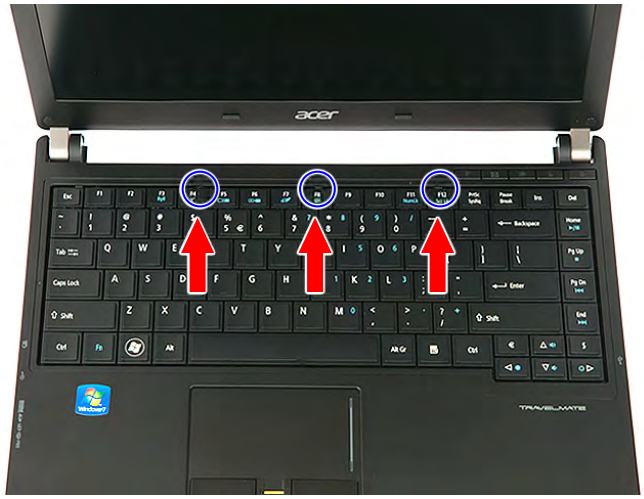


Figure 3-18. Keyboard Latches

4. Gently turn the keyboard over and carefully place it on top of the palmrest.

Figure 3-19. Keyboard

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook.
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

5. Release the connector latch (**1**) and then disconnect the cable from the mainboard (**2**).

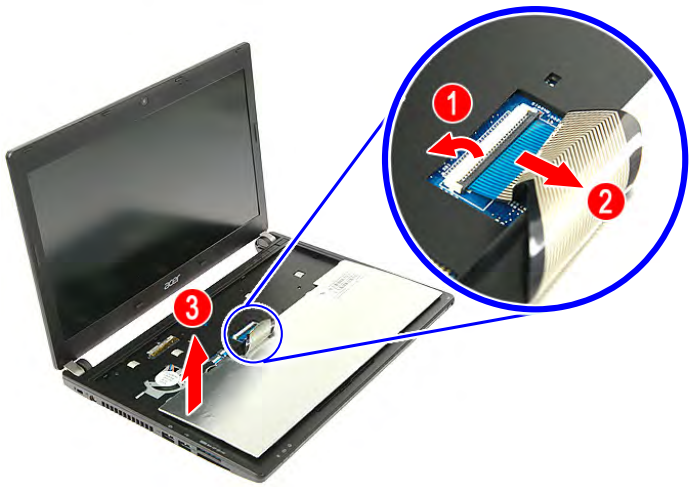


Figure 3-20. Keyboard Cable

6. Lift the keyboard off the palmrest (**3**).

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Main Unit Disassembly Process

Main Unit Disassembly Flowchart

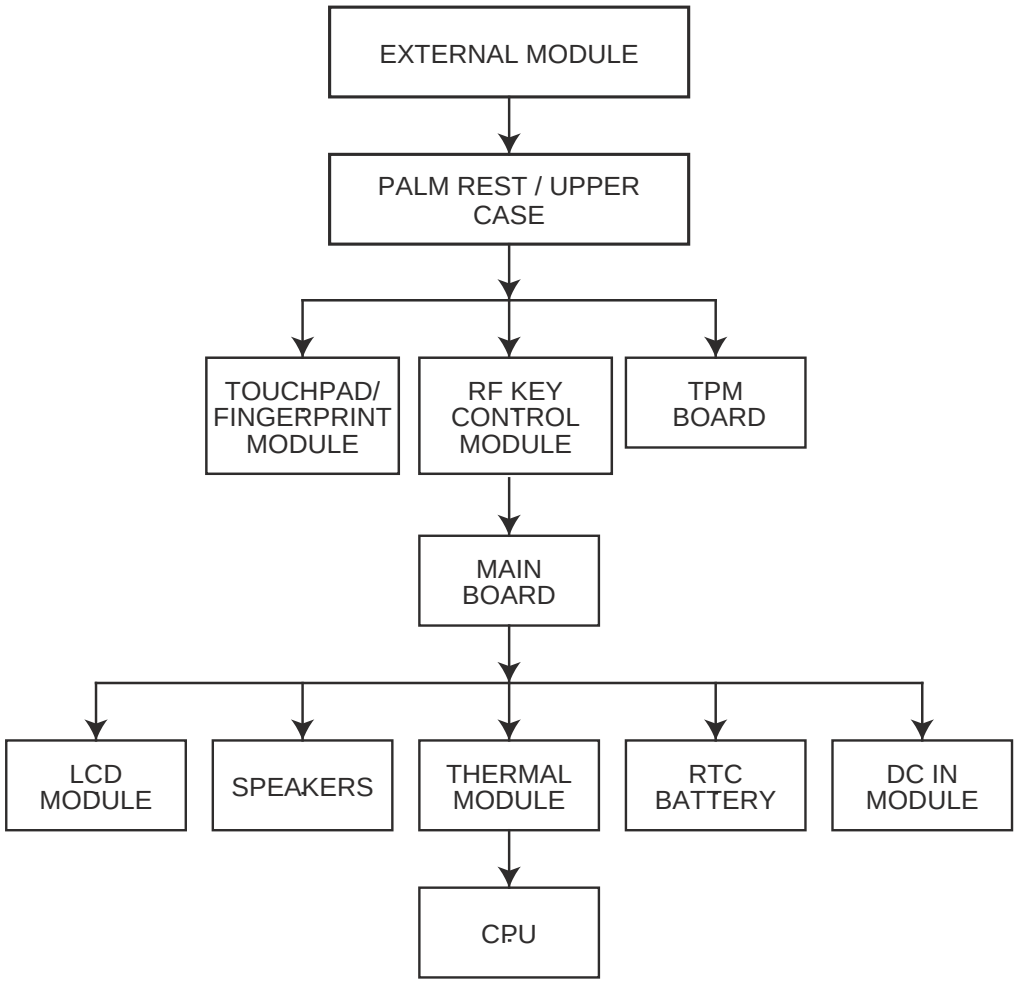


Figure 3-21. Main Unit Disassembly Flowchart

Table 3-21. Screw List

Step	Screw	Quantity	Acer Part Number
Palmrest Module/Upper Case Disassembly	M2 × L6	15	86.00F58.726
Touchpad Bracket Disassembly	M2 × L2.5	4	86.00D72.620
RF Key Control Disassembly	M2 × L3.5	1	86.6A562.3R5
Mainboard Disassembly	M2 × L3.5	1	86.6A562.3R5
Thermal Module Disassembly	–	3	–
Speakers Disassembly	M2 x L3	2	86.00H25.523
LCD Module Disassembly	M2 × L6	3	86.00F58.726

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook.
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Removing the Palmrest Module/Upper Case

1. Perform the “Removing the Base Door” procedure described on page 3-10.
2. Perform the “Removing the HDD Module” procedure described on page 3-11.
3. Perform the “Removing the WLAN Module” procedure described on page 3-15.
4. Perform the “Removing the DIMM Modules” procedure described on page 3-17.
5. Perform the “Removing the Keyboard” procedure described on page 3-18.
6. Release the RD1 connector latch (**1**), then disconnect the cable from the mainboard (**2**).

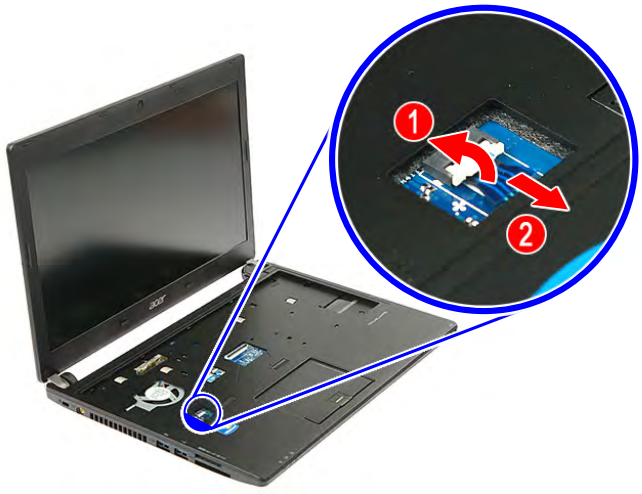


Figure 3-22. RD1 Board Cable

7. Release the touchpad connector latch (**1**), then disconnect the cable from the mainboard (**2**).

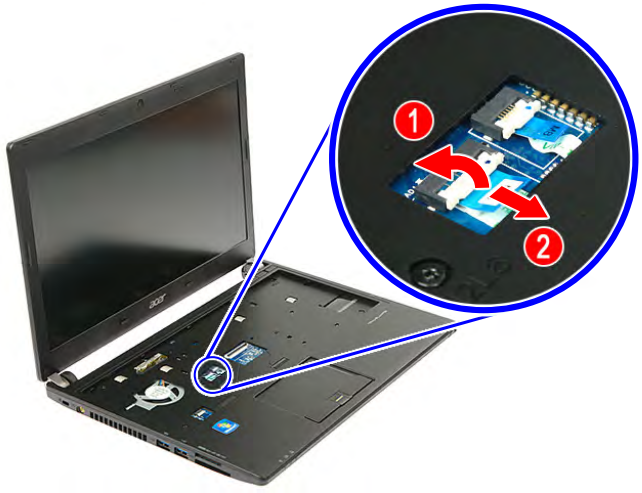


Figure 3-23. Touchpad Board Cable

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

8. Release the fingerprint board connector latch (**1**), then disconnect the cable from the mainboard (**2**).

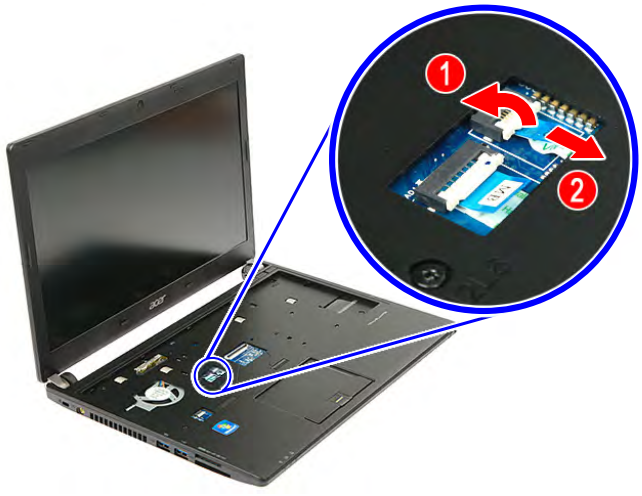


Figure 3-24. Fingerprint Board Cable

9. Remove the seven top side screws securing the palm rest/upper case module to the lower case assembly.

Figure 3-25. Upper Case Screws – Top Side

Table 3-25. Screws

Step	Screw	Quantity	Screw Type
Upper Case Disassembly	M2 × L6	7	

10. Turn the computer over to access the base side of the lower case assembly.

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook.
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

11. Remove the eight base side screws securing the palm rest/upper case module to the lower case assembly.

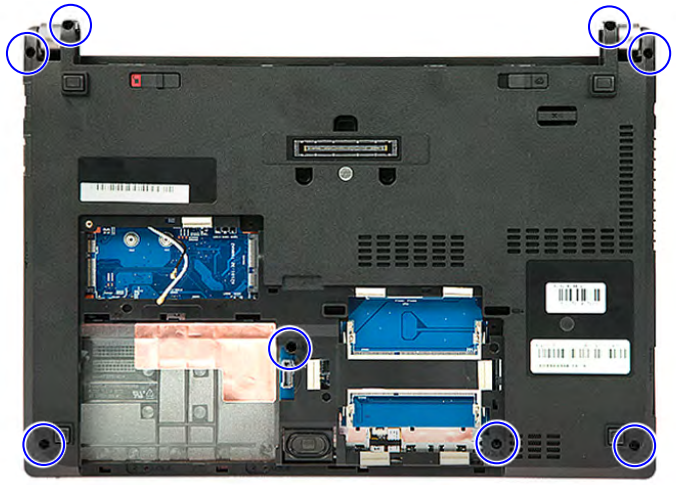


Figure 3-26. Upper Case Screws – Base Side

Table 3-26. Screws

Step	Screw	Quantity	Screw Type
Upper Case Disassembly	M2 × L6	8	

12. Turn the computer over and open the LCD panel.
13. Locate the small gaps between the upper case and lower case, and insert a small flat-blade screwdriver or non-marring scribe into each gap to separate the one from the other. Once the upper case is separated, lift it off the lower case.

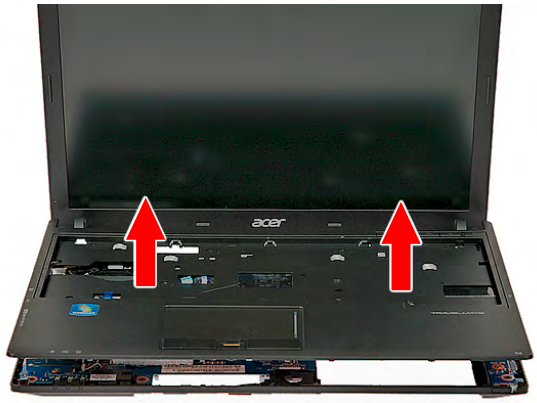


Figure 3-27. Upper Case

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Removing the Touchpad/Fingerprint Module

1. Perform the “Removing the Palmrest Module/Upper Case” procedure described on page 3-21.
2. Detach the pvc spacer from the upper case assembly.

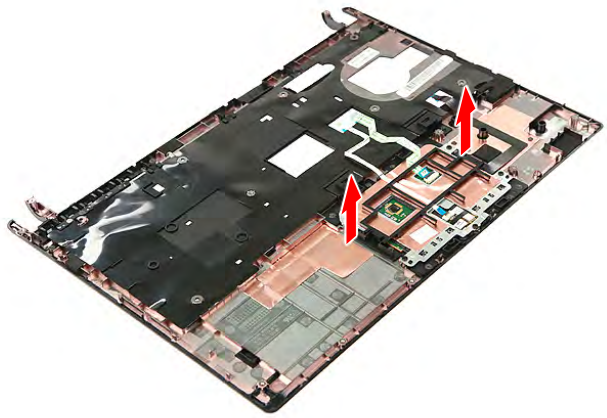


Figure 3-28. Touchpad/Fingerprint Module Spacer

3. Release the fingerprint cable from the self adhesive tape securing it to the upper case.

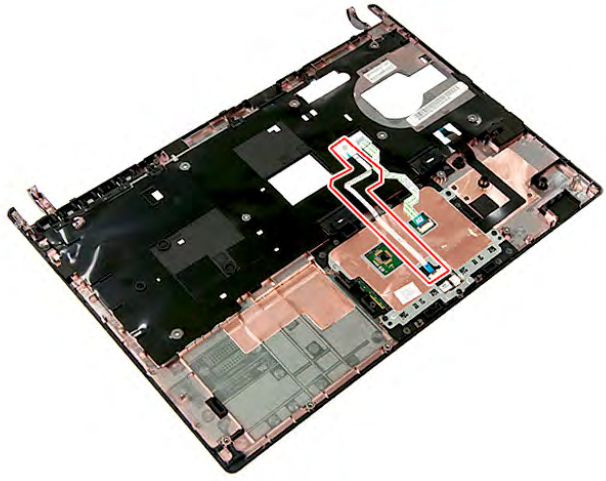


Figure 3-29. Fingerprint Cable Self Adhesive Tape

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook.
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

4. Release the fingerprint board connector latch (**1**), then disconnect the fingerprint cable from the board (**2**).

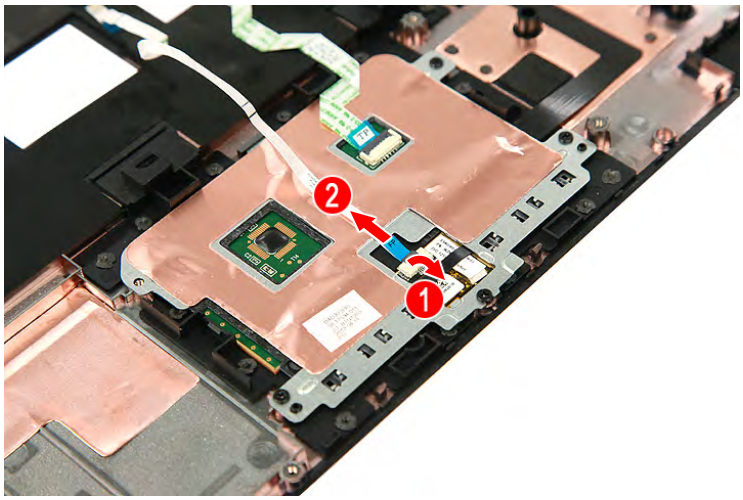


Figure 3-30. Fingerprint Cable

5. Release the touchpad cable from the self adhesive tape securing it to the upper case.

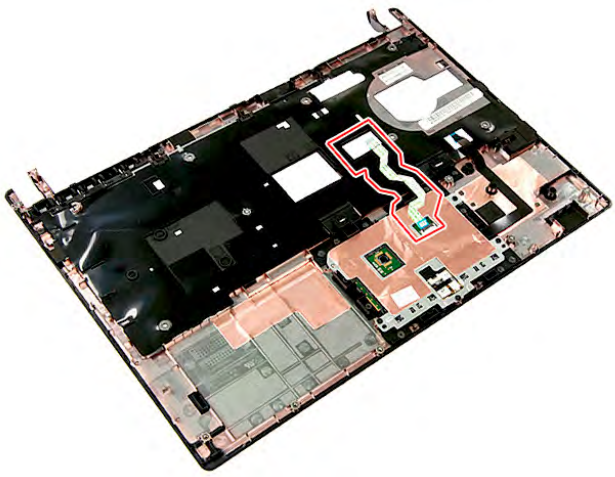


Figure 3-31. Touchpad Cable Self Adhesive Tape

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

6. Release the touchpad board connector latch (**1**), then disconnect the touchpad cable from the board (**2**).

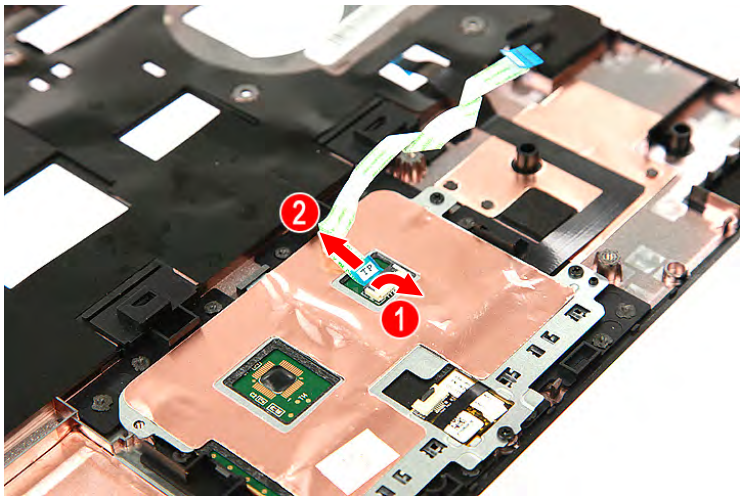


Figure 3-32. Touchpad Cable

7. Remove the four screws securing the touchpad bracket to the upper case.

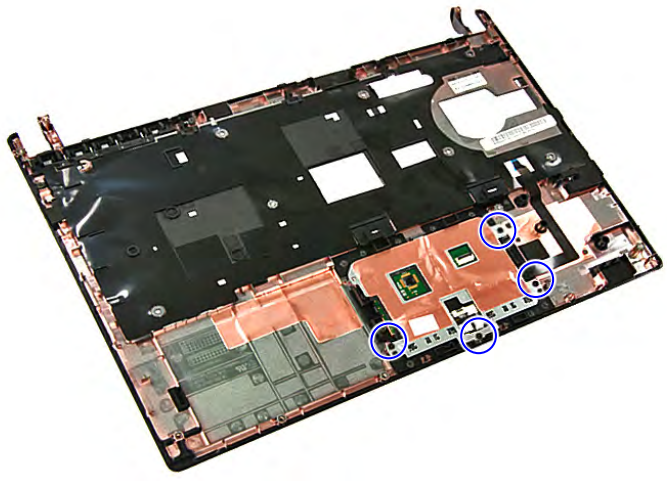


Figure 3-33. Touchpad Bracket Screws

Table 3-33. Screws

Step	Screw	Quantity	Screw Type
Touchpad Bracket Disassembly	M2 × L2.5	4	

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook.
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

8. Detach the touchpad bracket from the upper case.

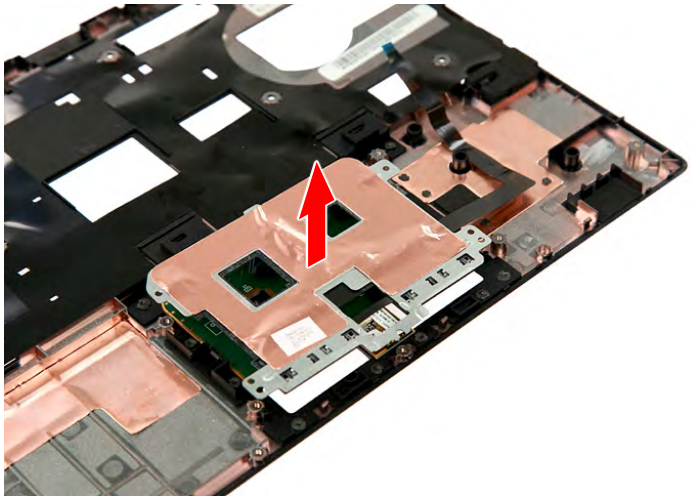


Figure 3-34. Touchpad Bracket

9. Insert a small flat-blade screwdriver between the fingerprint board and the upper case, and carefully pry the board loose. Detach the fingerprint board from the upper case.

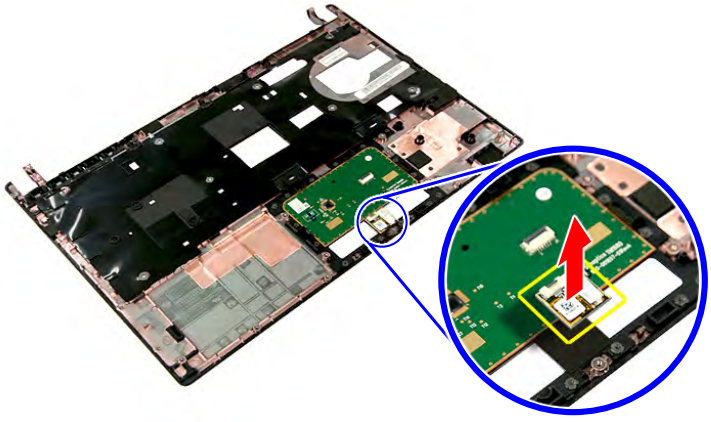


Figure 3-35. Fingerprint Board

NOTE:

A circuit board that is > 10cm^2 has been highlighted with a yellow rectangle in Figure 3-35. Follow the local regulations for disposing this type of circuit board.

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook.
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

10. Insert a small flat-blade screwdriver between the touchpad board and the upper case, and carefully pry the board loose. Detach the touchpad board from the upper case.

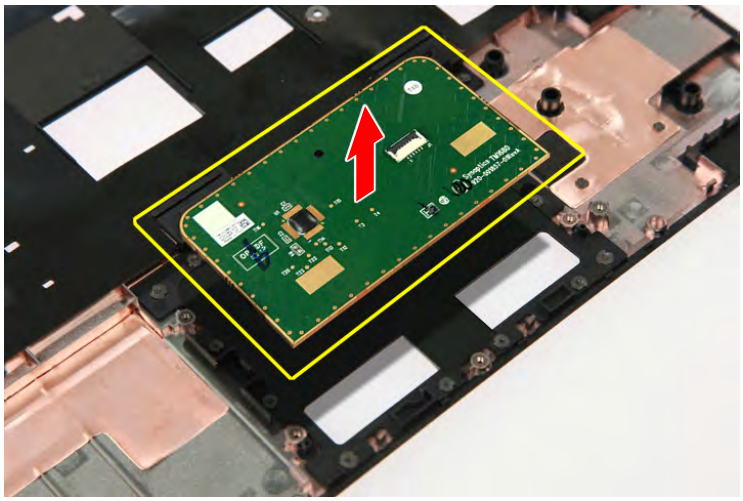


Figure 3-36. Touchpad Board

NOTE:

A circuit board that is > 10cm^2 has been highlighted with a yellow rectangle in Figure 3-36. Follow the local regulations for disposing this type of circuit board.

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Removing the RF Key Control Module

1. Perform the “Removing the Palmrest Module/Upper Case” procedure described on page 3-21.
2. Remove the screw securing the RF key control board to the mainboard.

Figure 3-37. RF Key Control Board Screw

Table 3-37. Screw

Step	Screw	Quantity	Screw Type
RF Key Control Disassembly	M2 × L3.5	1	

3. Lift the RF key control board off the mainboard.

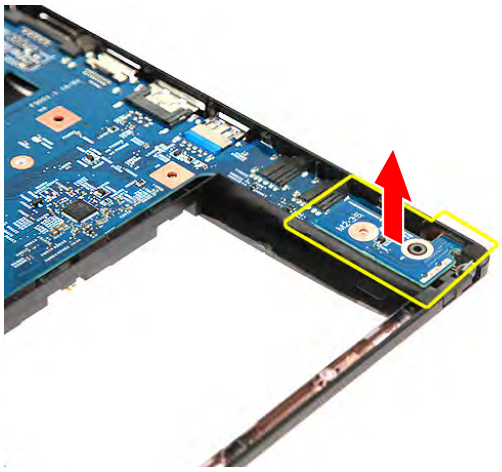


Figure 3-38. RF Key Control Board

NOTE:

A circuit board that is > 10cm^2 has been highlighted with a yellow rectangle in Figure 3-38. Follow the local regulations for disposing this type of circuit board.

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Removing the TPM Board

1. Perform the “Removing the Palmrest Module/Upper Case” procedure described on page 3-21.
2. Detach the TPM board from its mainboard connector.

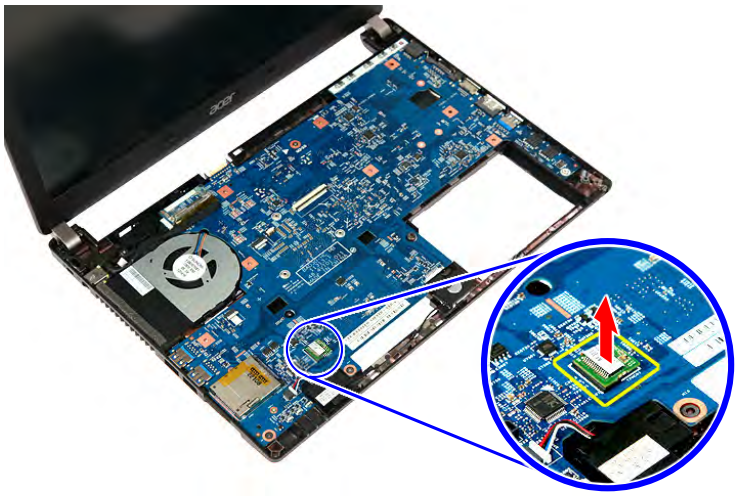


Figure 3-39. TPM Board

NOTE:

A circuit board that is > 10cm^2 has been highlighted with a yellow rectangle in Figure 3-39. Follow the local regulations for disposing this type of circuit board.

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Removing the Mainboard

1. Perform the “Removing the Palmrest Module/Upper Case” procedure described on page 3-21.
2. Perform the “Removing the RF Key Control Module” procedure described on page 3-29.
3. Perform the “Removing the TPM Board” procedure described on page 3-30.
4. Release the LCD cable from the transparent tape securing it to the mainboard (**1**), then disconnect the LCD cable from the mainboard (**2**).

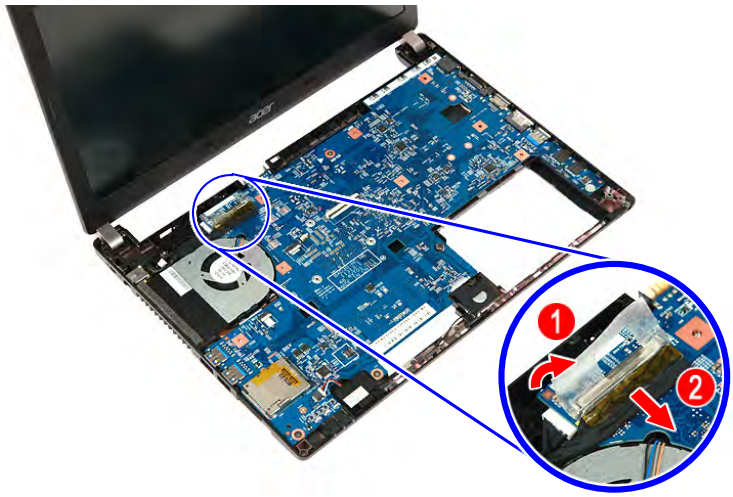


Figure 3-40. LCD Cable Tape

5. Disconnect the speaker cable from the mainboard.

Figure 3-41. Speaker Cable

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

6. Remove the screw securing the mainboard to the lower case assembly.

Figure 3-42. Mainboard Screw

Table 3-42. Screw

Step	Screw	Quantity	Screw Type
Mainboard Disassembly	M2 × L3.5	1	

7. Lift the mainboard at an angle and gently turn it on its side.

Figure 3-43. Mainboard

NOTE:

A circuit board that is >10 cm2 has been highlighted with a yellow rectangle in Figure 3-43. Follow the local regulations for disposing this type of circuit board.

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

8. Disconnect the DC in cable from the mainboard.

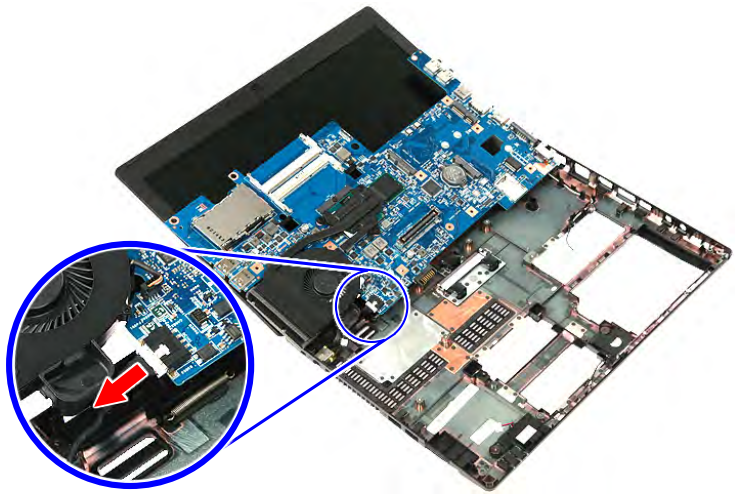


Figure 3-44. DC In Cable

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Removing the Thermal Module

1. Perform the “Removing the Mainboard” procedure described on page 3-31.
2. Disconnect the thermal module fan cable from the mainboard.

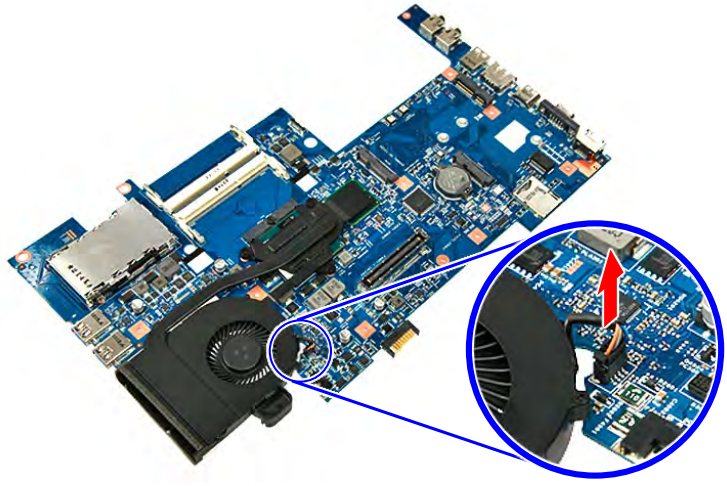


Figure 3-45. Fan Cable

3. Loosen the three spring-loaded captive screws securing the thermal module to the mainboard. Follow the screw sequence indicated on Figure 3-46.

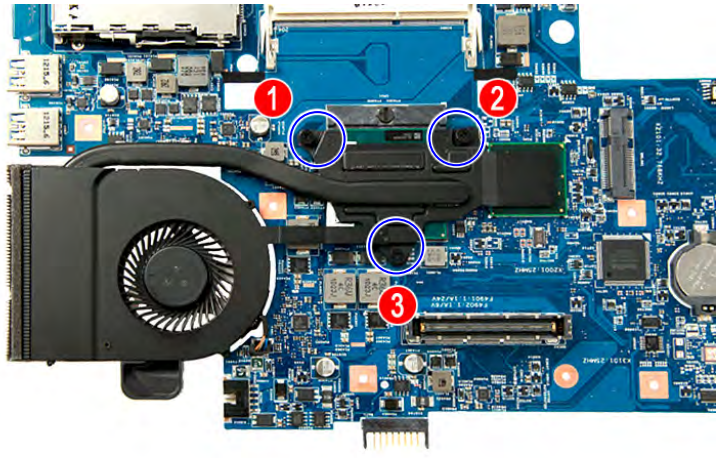


Figure 3-46. Thermal Module Screws

Table 3-46. Screws

Step	Screw	Quantity	Screw Type
Thermal Module Disassembly	–	3	–

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

4. Detach the thermal module from the mainboard.

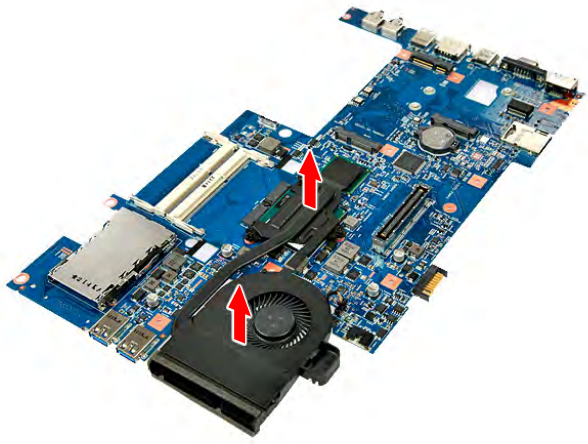


Figure 3-47. Thermal Module

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook.
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Removing the CPU

1. Perform the “Removing the Mainboard” procedure described on page 3-31.
2. Perform the “Removing the Thermal Module” procedure described on page 3-34.
3. Use a flat-blade screwdriver to turn the CPU socket lock screw counter-clockwise.

Figure 3-48. CPU Socket Screw

4. Detach the CPU from the mainboard.

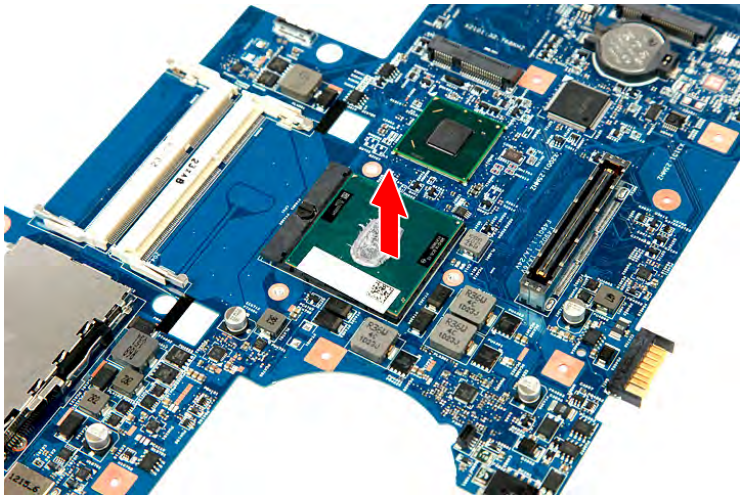


Figure 3-49. CPU

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook.
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Removing the RTC Battery

1. Perform the “Removing the Mainboard” procedure described on page 3-31.
2. Press the latch that secures the RTC battery to its socket (**1**), then detach the battery from the mainboard (**2**).

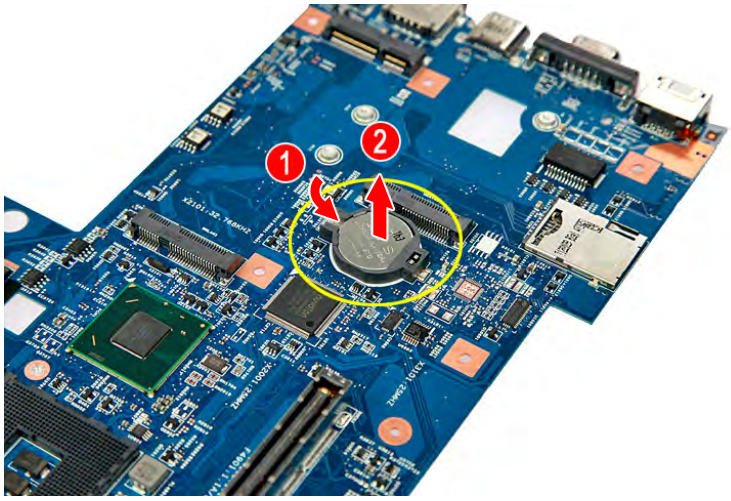


Figure 3-50. RTC Battery

NOTE:

The RTC battery has been highlighted with a yellow circle in Figure 3-50. Detach the RTC battery and follow the local regulations for disposing it.

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook.
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Removing the Speakers

1. Perform the “Removing the Mainboard” procedure described on page 3-31.
2. Remove the two screws securing the speakers to the lower case assembly.

Figure 3-51. Speaker Screws

Table 3-51. Screws

Step	Screw	Quantity	Screw Type
Speakers Disassembly	M2 x L3	2	

3. Lift the speakers from the lower case.

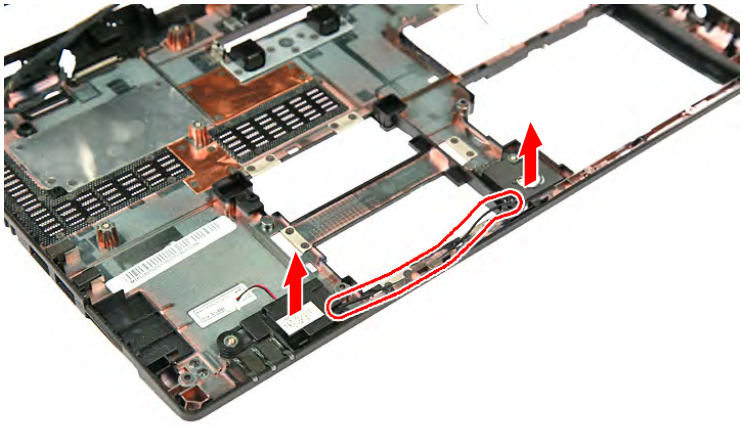


Figure 3-52. Left and Right Speakers

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook.
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Removing the DC In Module

1. Perform the “Removing the Mainboard” procedure described on page 3-31.
2. Detach the DC In module from the lower case assembly.

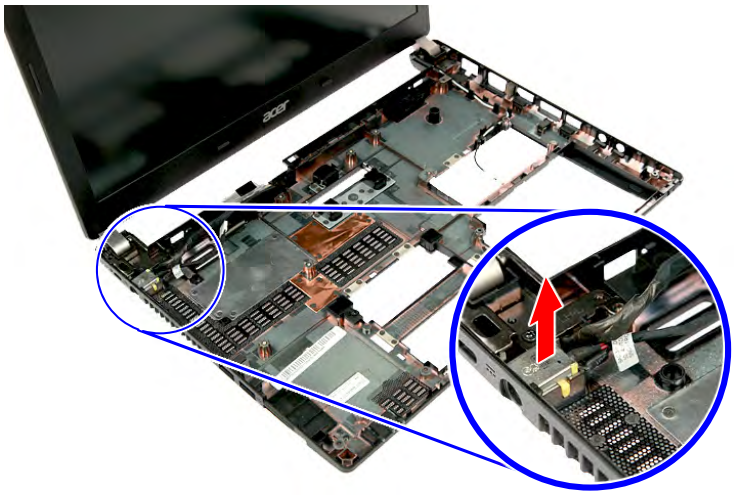


Figure 3-53. DC In Module

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Removing the LCD Module

1. Perform the “Removing the Mainboard” procedure described on page 3-31.
2. Release the WLAN antenna cables from the lower case assembly.

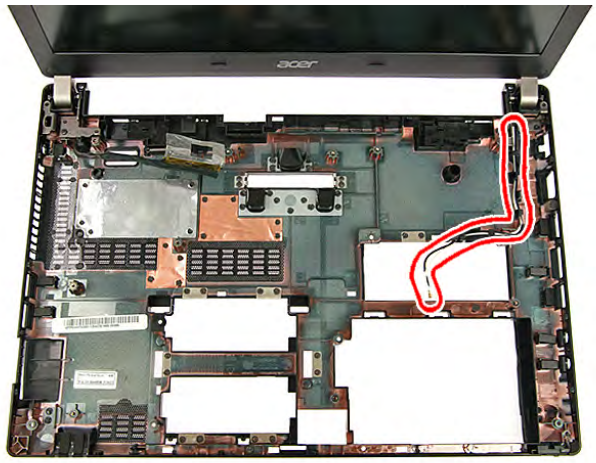


Figure 3-54. WLAN Antenna Cables

3. Remove the three screws securing the LCD module to the lower case assembly.

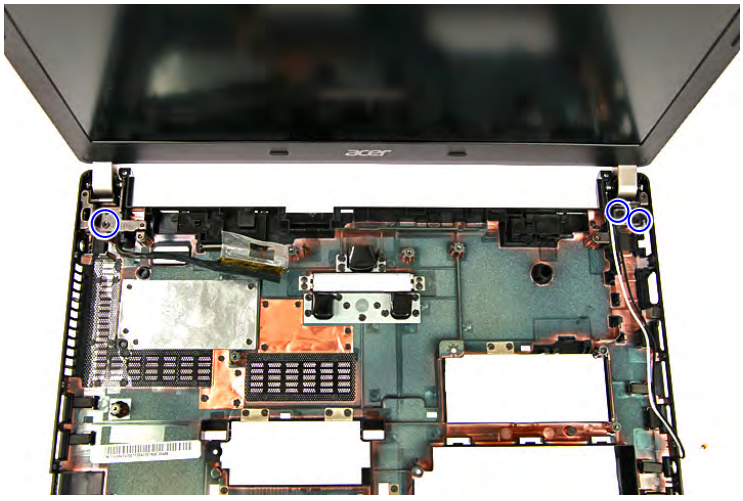


Figure 3-55. LCD Module Hinge Screws

Table 3-55. Screws

Step	Screw	Quantity	Screw Type
LCD Module Disassembly	M2 × L6	3	

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook.
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

4. Detach the LCD module from the lower case assembly.

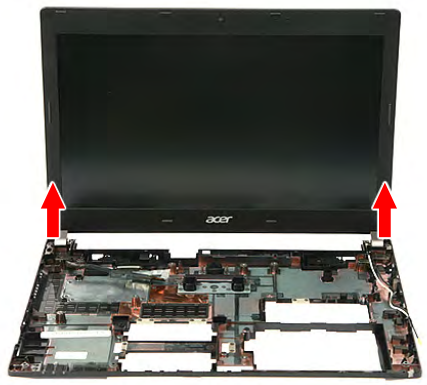


Figure 3-56. LCD Module

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

LCD Module Disassembly Process

LCD Module Disassembly Flowchart

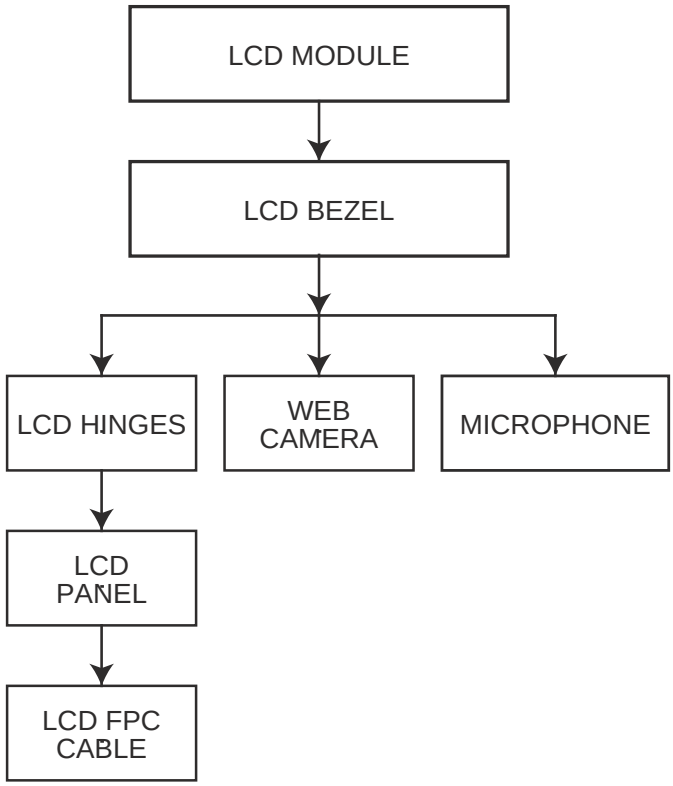


Figure 3-57. LCD Module Disassembly Flowchart

Table 3-56. Screw List

Step	Screw	Quantity	Acer Part Number
LCD Bezel Disassembly	M2 × L3.5	2	86.6A562.3R5
LCD Hinges Disassembly	M2 × 2.5	2	86.2A562.2R5
LCD Panel Disassembly	M2 × L2.5	4	86.00D72.620

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook.
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Removing the LCD Bezel

1. Perform the “Removing the LCD Module” procedure described on page 3-40.
2. Remove the two screw rubber covers on the lower corners of the LCD bezel.

Figure 3-58. LCD Bezel Screw Covers

3. Remove the two screws securing the LCD bezel to the LCD cover.

Figure 3-59. LCD Bezel Screws

Table 3-59. Screws

Step	Screw	Quantity	Screw Type
LCD Bezel Disassembly	M2 × L3.5	2	

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

4. Carefully pry loose the LCD bezel from the LCD cover. Start on the bottom side, continue to the left and right sides, and finally the top side.

Figure 3-60. LCD Bezel

5. Remove the bezel from the LCD module.

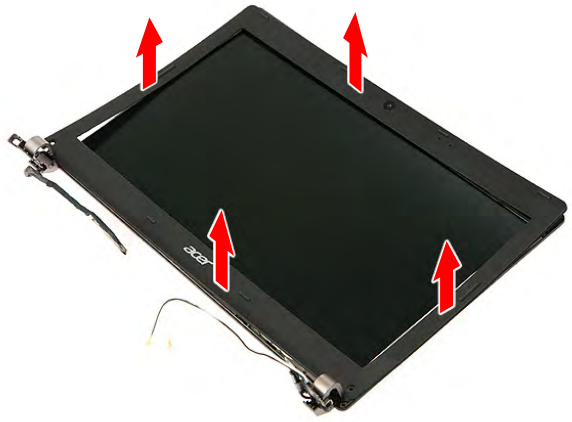


Figure 3-61. LCD Bezel

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook.
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Removing the LCD Hinges

1. Perform the “Removing the LCD Bezel” procedure described on page 3-43.
2. Remove the two screws securing the LCD hinges to the LCD cover.

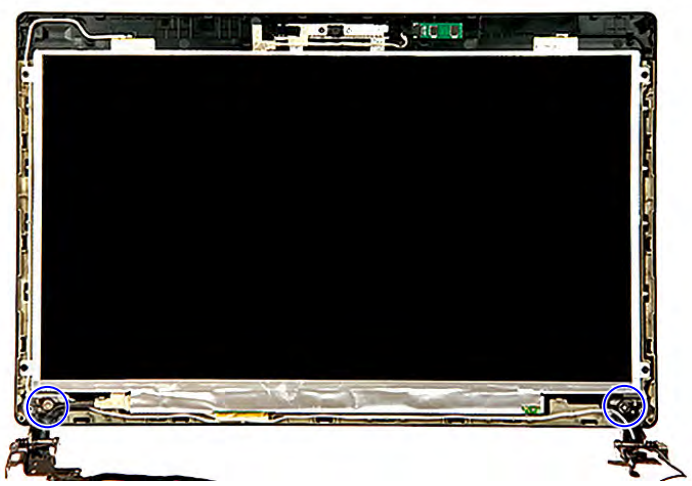


Figure 3-62. LCD Hinge Screws

Table 3-62. Screws

Step	Screw	Quantity	Screw Type
LCD Hinges Disassembly	M2 × 2.5	2	

3. Release the LCD & antenna cables from the LCD hinges, then remove the LCD hinges from the LCD cover.

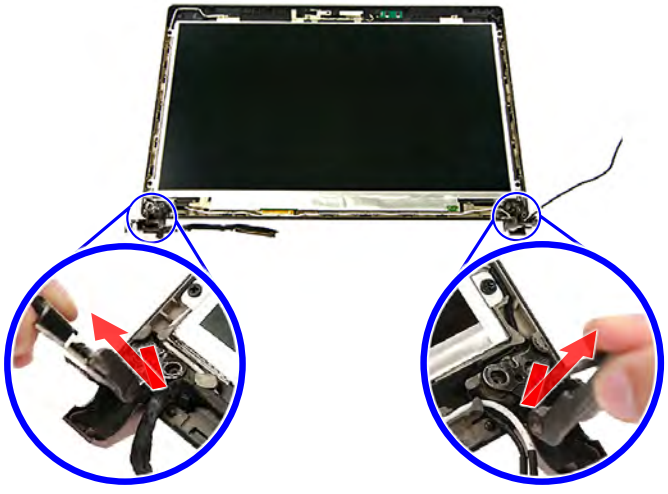


Figure 3-63. Left and Right LCD Hinges

HTTP://MYCOMP.SU - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Removing the Microphone

1. Perform the “Removing the LCD Bezel” procedure described on page 3-43.
2. Disconnect the microphone cable from the microphone board.

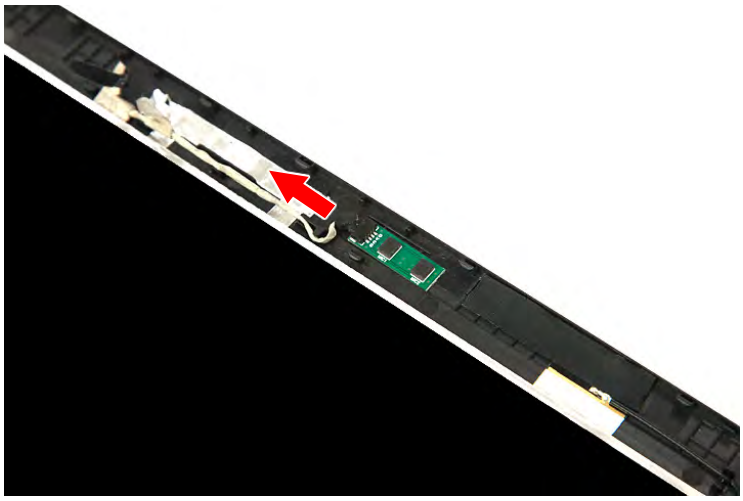


Figure 3-64. Microphone Cable

3. Detach the microphone from the LCD cover.

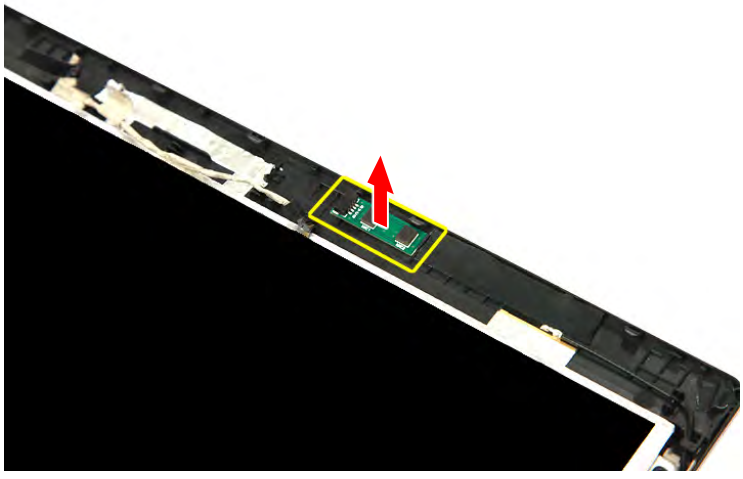


Figure 3-65. Microphone

NOTE:

A circuit board that is >10 cm2 has been highlighted with a yellow rectangle in Figure 3-65. Follow the local regulations for disposing this type of circuit board.

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Removing the Camera Board

1. Perform the “Removing the LCD Bezel” procedure described on page 3-43.
2. Release the camera cable from the adhesive tape securing it.

Figure 3-66. Camera Cable Adhesive Tape

3. Disconnect the camera cable from the camera board.

Figure 3-67. Camera Cable

4. Release the camera board from the adhesive tape securing it.

HTTP://MYCOMP.SU - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

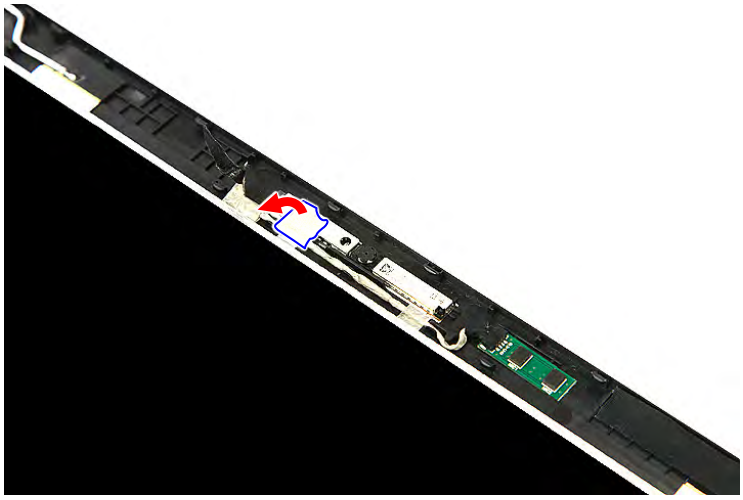


Figure 3-68. Camera Board Adhesive Tape

5. Detach the camera board from the LCD cover.

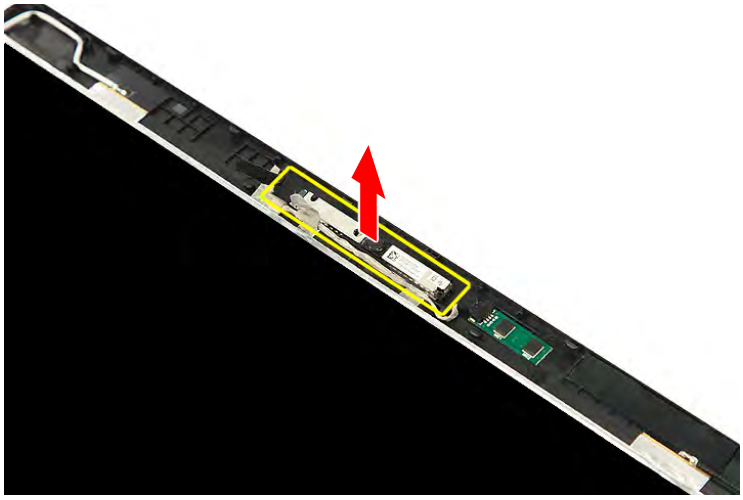


Figure 3-69. Camera Board

NOTE:

A circuit board that is >10 cm2 has been highlighted with a yellow rectangle in Figure 3-69. Follow the local regulations for disposing this type of circuit board.

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Removing the LCD Panel

1. Perform the “Removing the LCD Hinges” procedure described on page 3-45.
2. Remove the four screws securing the LCD panel to the LCD cover.

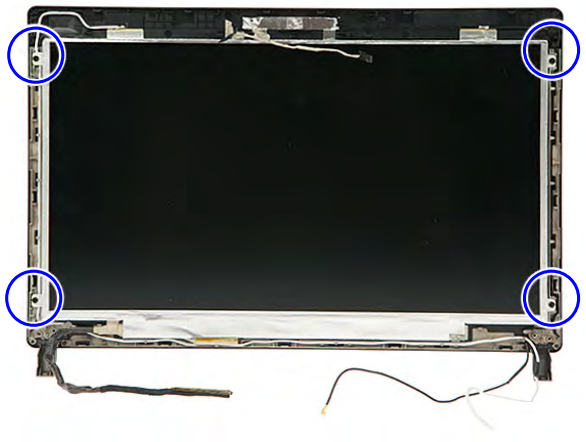


Figure 3-70. LCD Panel Screws

Table 3-70. Screws

Step	Screw	Quantity	Screw Type
LCD Panel Disassembly	M2 × L2.5	4	

3. Lift the panel from the LCD cover.

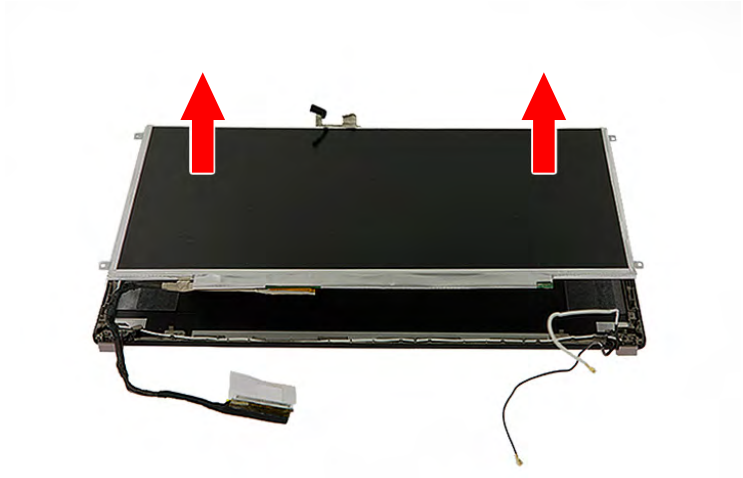


Figure 3-71. LCD Panel

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook.
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Removing the LCD FPC Cable

1. Perform the “Removing the LCD Panel” procedure described on page 3-49.
2. Detach the self adhesive tapes securing the FPC cable to the back of the LCD Panel.

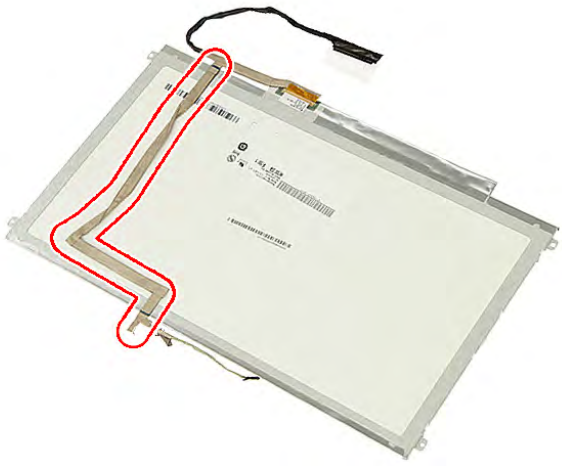


Figure 3-72. LCD FPC Cable Self Adhesive Tape

3. Detach the transparent adhesive tape securing the LCD FPC cable to the LCD panel.

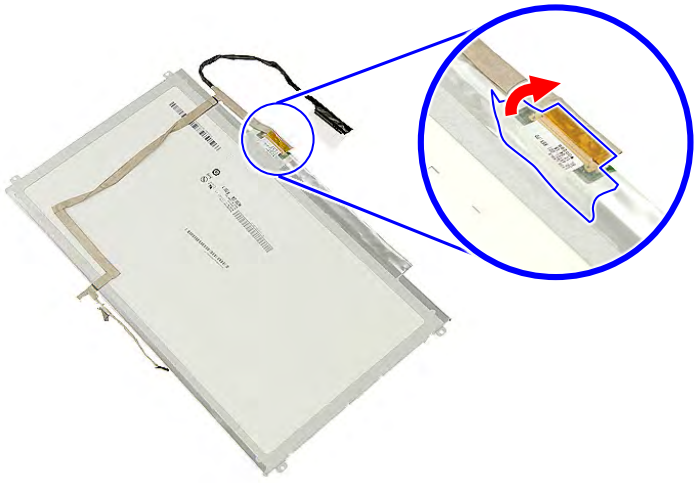


Figure 3-73. LCD FPC Cable Transparent Adhesive Tape

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

4. Disconnect the LCD FPC cable from the LCD panel.

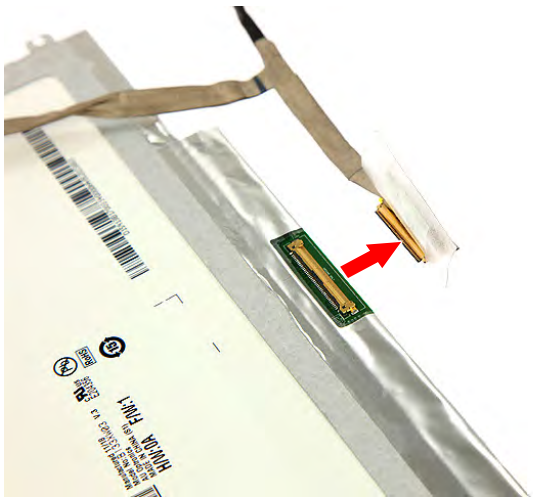


Figure 3-74. LCD FPC Cable

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

LCD Module Reassembly Process

Replacing the LCD FPC Cable

1. Connect the LCD FPC cable to the LCD panel.

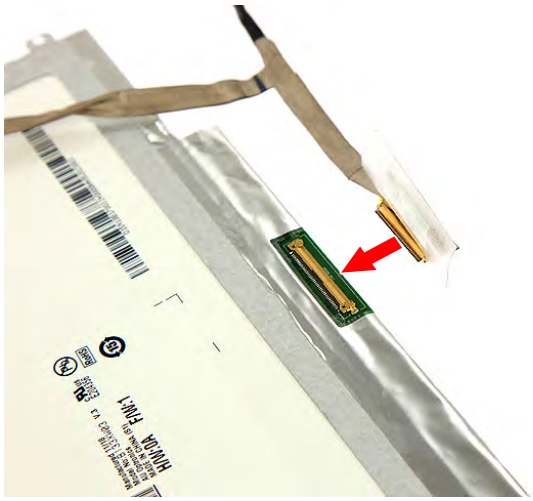


Figure 3-75. LCD FPC Cable

2. Secure the LCD FPC cable to the LCD panel using transparent adhesive tape.

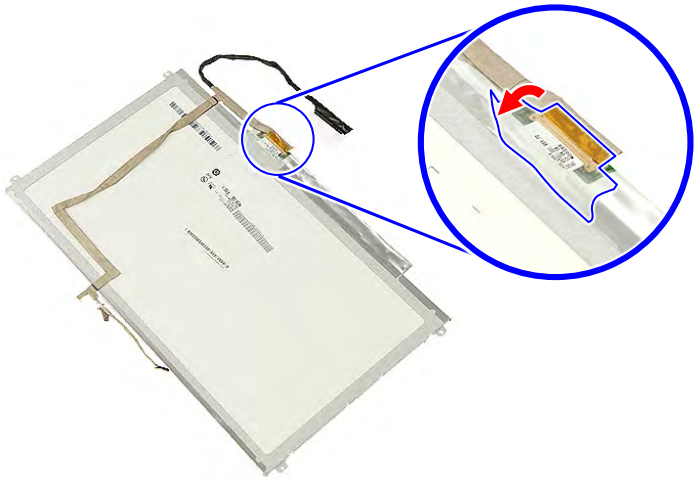


Figure 3-76. LCD FPC Cable Transparent Adhesive Tape

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

3. Secure the FPC cable to the back of the LCD Panel using self adhesive tape.

Figure 3-77. LCD FPC Cable Self Adhesive Tape

HTTP://MYCOMP.SU - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Replacing the LCD Panel

1. Place the panel into the LCD cover.

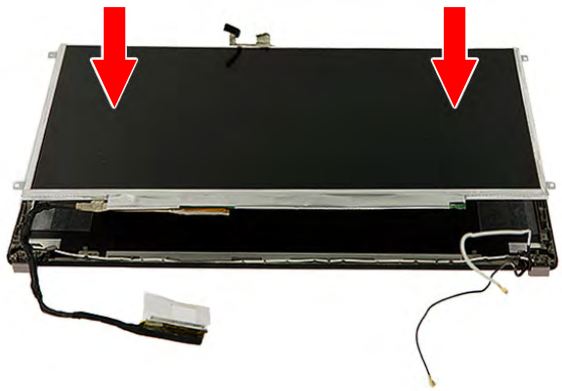


Figure 3-78. LCD Panel

2. Secure the LCD panel to the LCD cover using four screws.

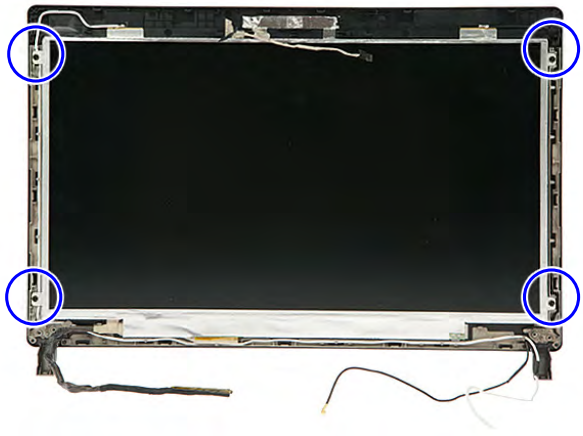


Figure 3-79. LCD Panel Screws

Table 3-79. Screws

Step	Screw	Quantity	Screw Type
LCD Panel Reassembly	M2 × L2.5	4	

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook.
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Replacing the Camera Board

1. Place the camera board into the LCD cover.

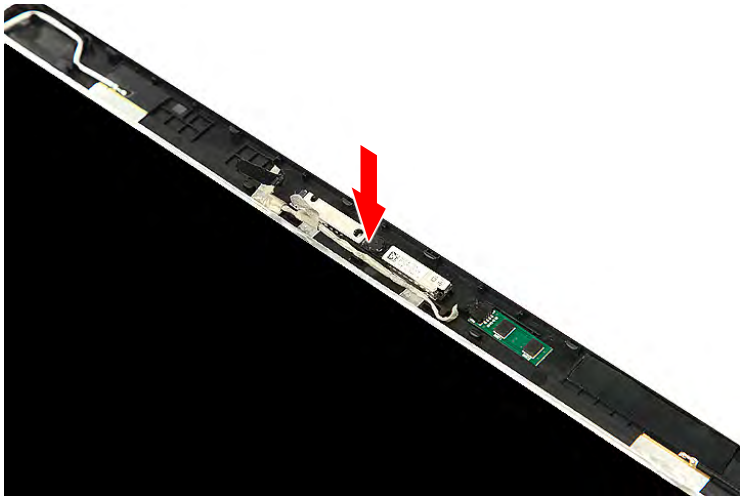


Figure 3-80. Camera Board

2. Secure the camera board to the LCD cover using adhesive tape.

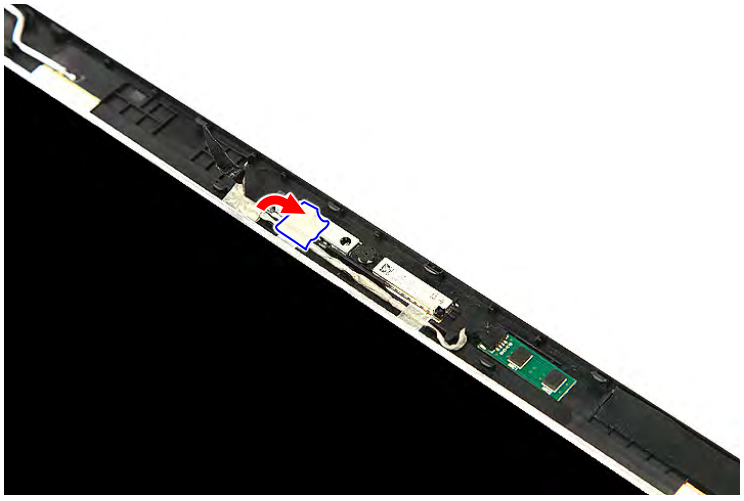


Figure 3-81. Camera Board Adhesive Tape

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

3. Connect the camera cable to the camera board.

Figure 3-82. Camera Cable

4. Secure the camera cable to the LCD cover using adhesive tape.

Figure 3-83. Camera Cable Adhesive Tape

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook.
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Replacing the Microphone

1. Place the microphone into the LCD cover.

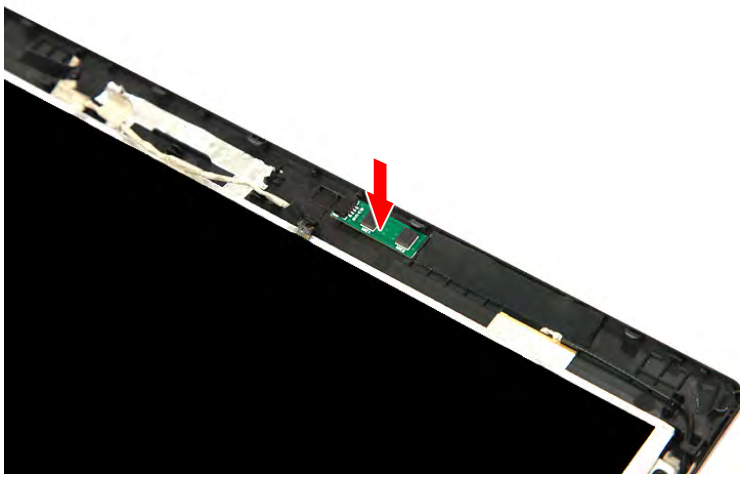


Figure 3-84. Microphone

2. Connect the microphone cable to the microphone board.

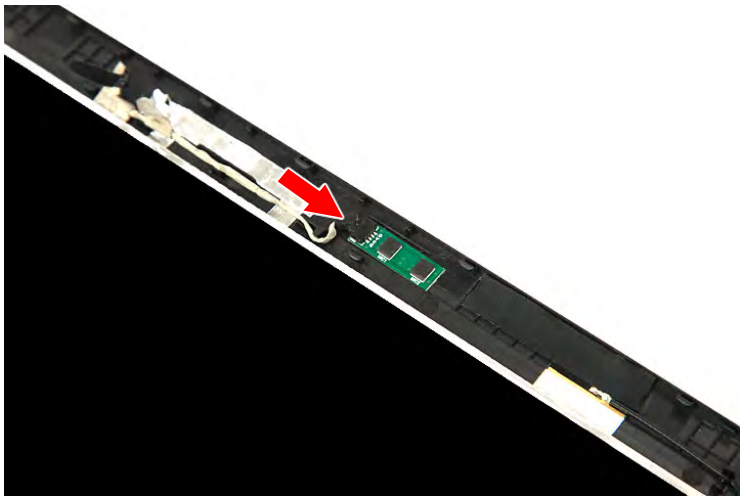


Figure 3-85. Microphone Cable

HTTP://MYCOMP.SU - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Replacing the LCD Hinges

1. Insert the LCD & antenna cables into the LCD hinges, then place the LCD hinges into the LCD cover.

Figure 3-86. Left and Right LCD Hinges

2. Secure the LCD hinges to the LCD cover using two screws.

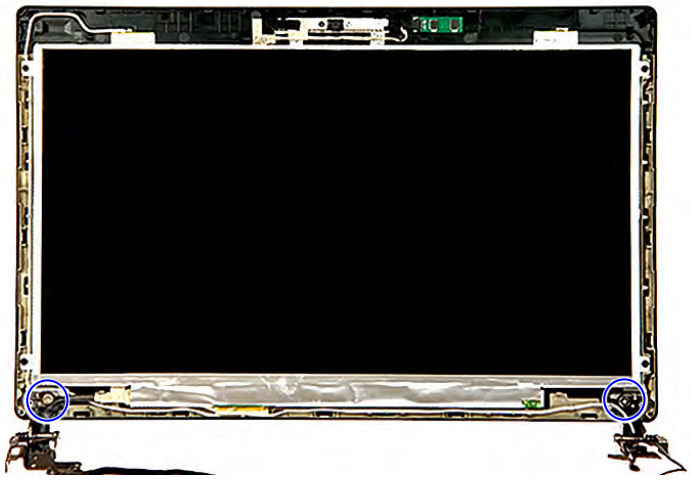


Figure 3-87. LCD Hinge Screws

Table 3-87. Screws

Step	Screw	Quantity	Screw Type
LCD Hinges Reassembly	M2 × 2.5	2	

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook.
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Replacing the LCD Bezel

1. Place the bezel into the LCD module then carefully press its sides downward until all the latches lock into place.

Figure 3-88. LCD Bezel

2. Secure the LCD bezel to the LCD cover using two screws.

Figure 3-89. LCD Bezel Screws

Table 3-89. Screws

Step	Screw	Quantity	Screw Type
LCD Bezel Reassembly	M2 × L3.5	2	

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook.
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

3. Place the two screw rubber covers into the lower corners of the LCD bezel.

Figure 3-90. LCD Bezel Screw Covers

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Main Unit Reassembly Process

Replacing the LCD Module

1. Place the LCD module into the lower case assembly.

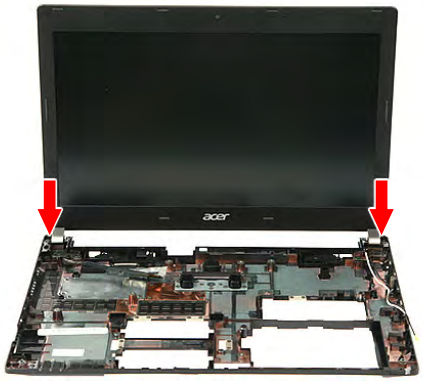


Figure 3-91. LCD Module

Figure 3-92. WLAN Antenna Cables

2. Secure the LCD module to the lower case assembly using three screws.

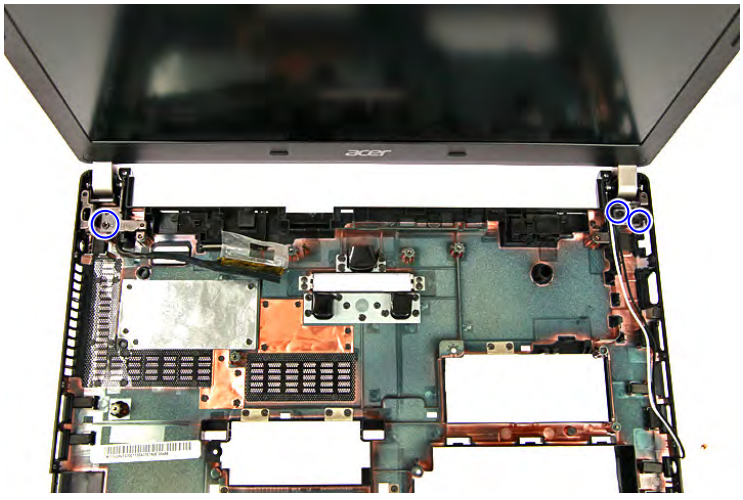


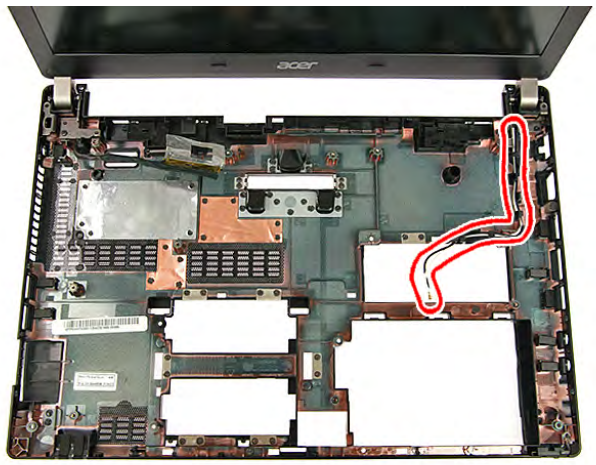
Figure 3-93. LCD Module Hinge Screws

Table 3-93. Screws

Step	Screw	Quantity	Screw Type
LCD Module Reassembly	M2 × L6	3	

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

3. Secure the WLAN antenna cables into the lower case assembly.



HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook.
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Replacing the DC In Module

1. Place the DC In module into the lower case assembly.

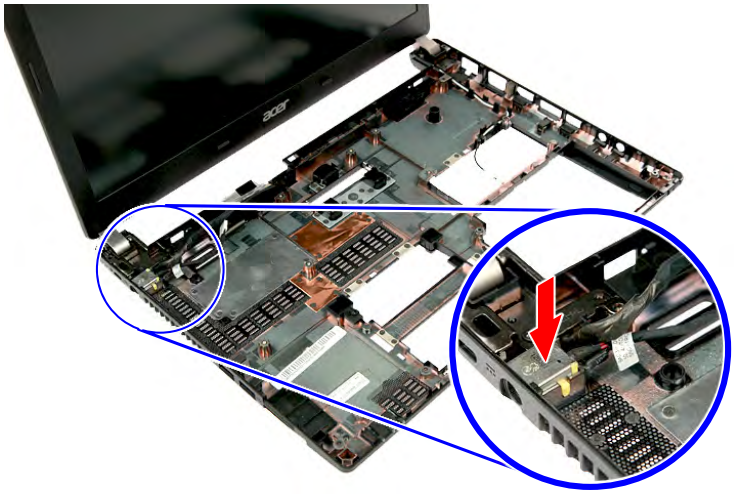


Figure 3-94. DC In Module

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Replacing the Speakers

1. Place the speakers into the lower case.

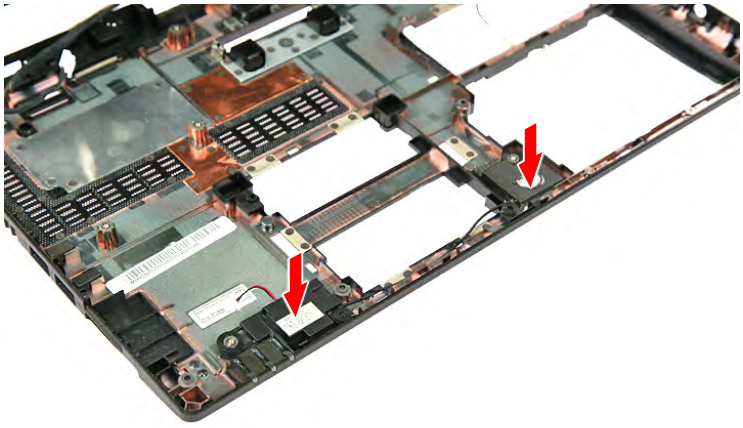


Figure 3-95. Left and Right Speakers

2. Secure the speakers to the lower case assembly using two screws.

Figure 3-96. Speaker Screws

Table 3-96. Screws

Step	Screw	Quantity	Screw Type
Speakers Reassembly	M2 x L3	2	

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook.
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Replacing the RTC Battery

1. Insert the battery into its socket (**1**), then press it down until it latch into place (**2**).

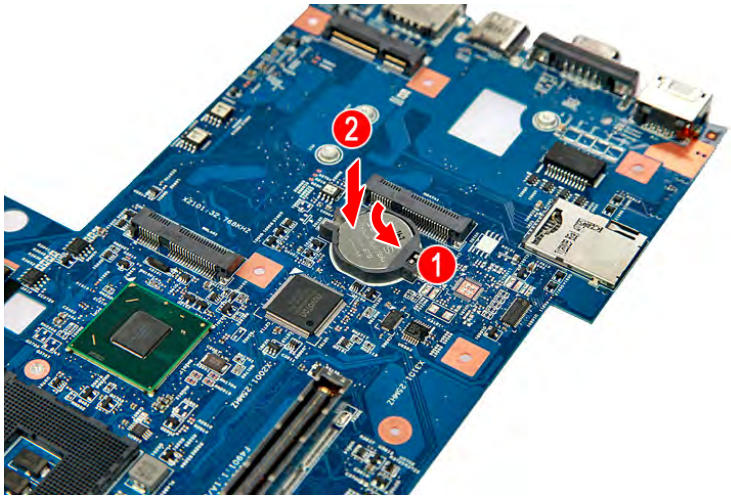


Figure 3-97. RTC Battery

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Replacing the CPU

1. Place the CPU into the mainboard making sure the gold arrow on the corner of the processor is aligned with the beveled corner of the socket. The processor will easily fit into the socket if it is properly oriented.

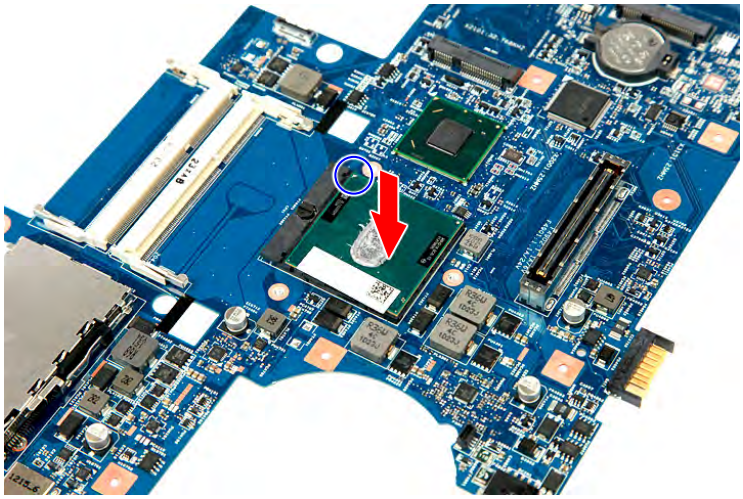


Figure 3-98. CPU

2. Use a flat-blade screwdriver to turn the socket screw clockwise to secure the CPU in place.

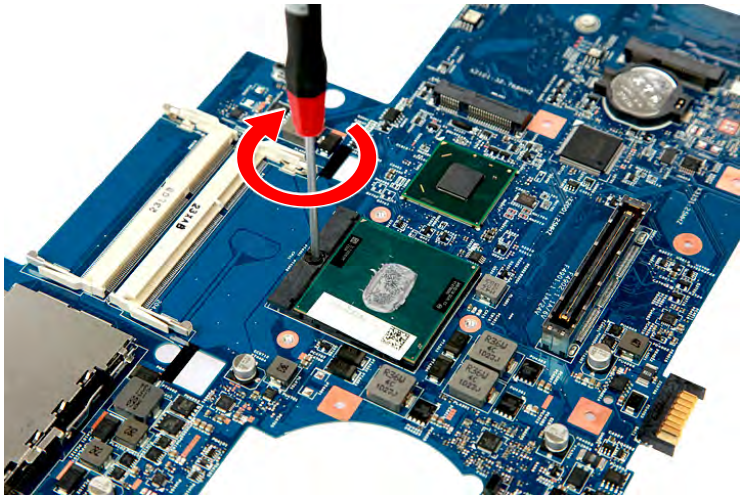


Figure 3-99. CPU Socket Screw

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook.
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Replacing the Thermal Module

IMPORTANT:

Make sure all thermal pads for the mainboard chipsets and VRAMs are in place before replacing the thermal module.

1. Use a lint-free cloth or cotton swab soaked in isopropyl alcohol or acetone to remove all traces of thermal grease from the contact surfaces on both the thermal module and the CPU.
2. Apply a small amount of thermal grease onto the center area of the CPU.

   There is no need to spread the grease manually, the force used during the installation of the thermal module is sufficient. The following brands of thermal grease are approved for use:

   - N302 I-Connosseur
   - Honeywell
   - Eapus XR-PE
3. Place the thermal module on the mainboard. Make sure to align the captive screws with the screw holes on the mainboard. Keep the module as level as possible to spread the thermal grease evenly.

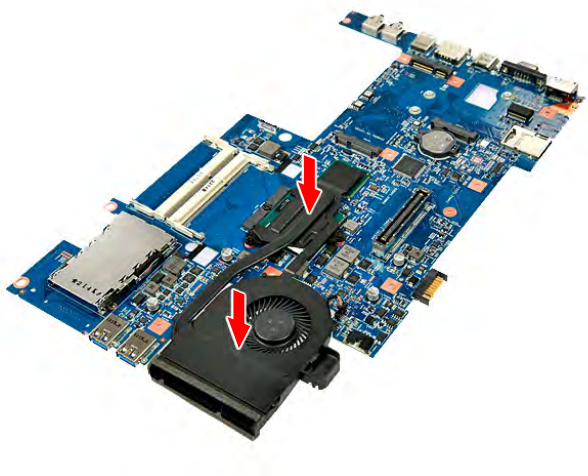


Figure 3-100. Thermal Module

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

4. Tighten the three spring-loaded captive screws securing the thermal module to the mainboard. Follow the screw sequence indicated on Figure 3-101.

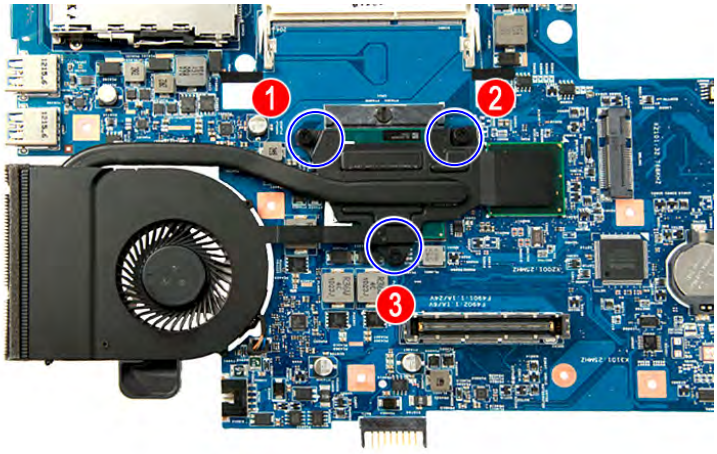


Figure 3-101. Thermal Module Screws

Table 3-101. Screws

Step	Screw	Quantity	Screw Type
Thermal Module Reassembly	–	3	–

5. Connect the thermal module fan cable to the mainboard.

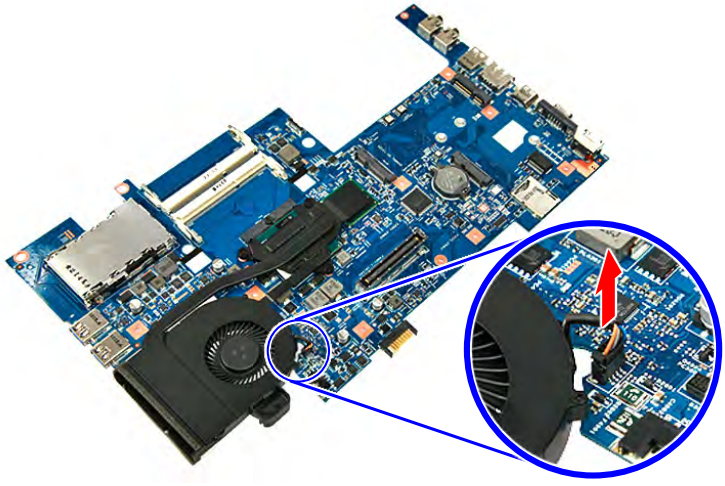


Figure 3-102. Fan Cable

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook.
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Replacing the Mainboard

1. Connect the DC input cable to the mainboard (**a**).
2. Connect the LAN cable to the mainboard (**b**).
3. With the mainboard at a 45 degree angle position the I/O ports of the mainboard to align with the port holes of the lower case.
4. Lower the mainboard in place (**c**).

   Note the following reminders:

   - Make sure a RTC battery is installed on the mainboard.
   - Check that the DC input cable is properly positioned on the top left corner of the lower case.
5. Connect the DC in cable to the mainboard.

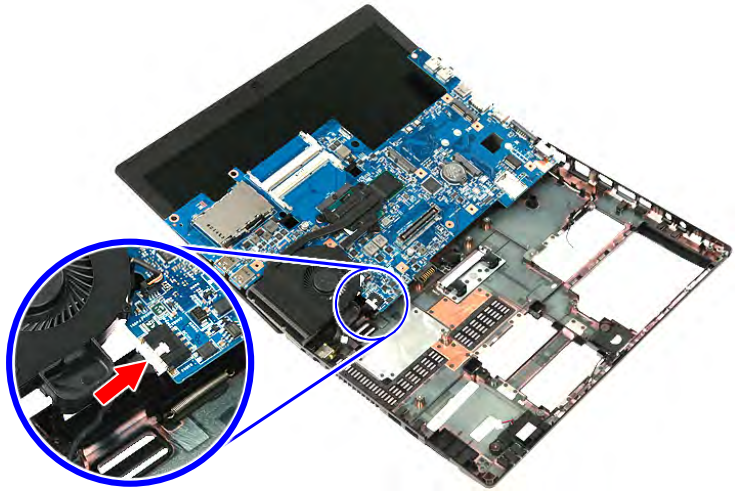


Figure 3-103. DC In Cable

6. Gently turn the mainboard on its side and place it into the lower case assembly.

Figure 3-104. Mainboard

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

7. Secure the mainboard to the lower case assembly using one screw.

Figure 3-105. Mainboard Screw

Table 3-105. Screw

Step	Screw	Quantity	Screw Type
Mainboard Reassembly	M2 × L3.5	1	

8. Connect the speaker cable to the mainboard.

Figure 3-106. Speaker Cable

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook.
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

9. Connect the LCD cable to the mainboard (**1**), then secure the LCD cable to the mainboard using transparent tape (**2**).

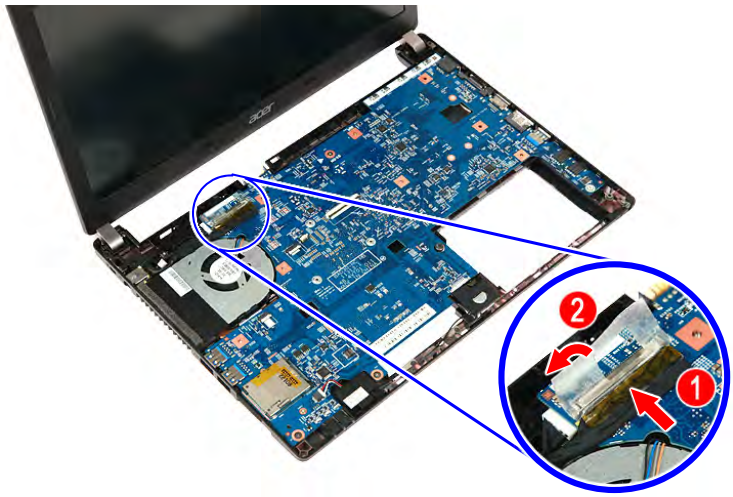


Figure 3-107. LCD Cable Tape

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Replacing the TPM Board

1. Place the TPM board into its mainboard connector and press it down until it latch into place.

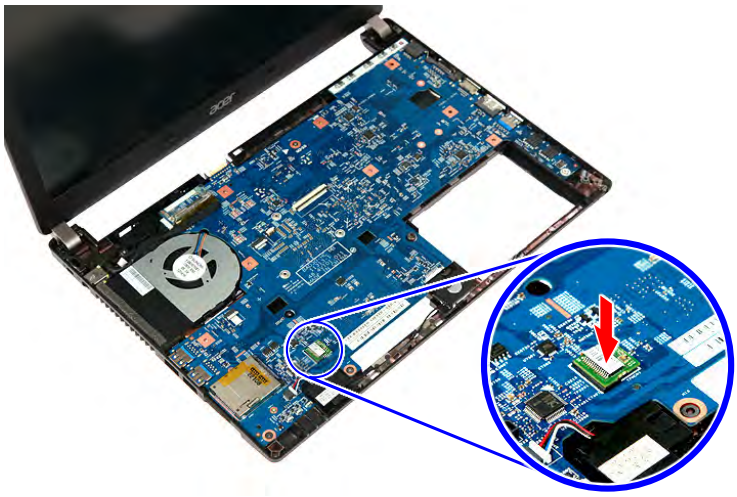


Figure 3-108. TPM Board

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Replacing the RF Key Control Board

1. Place the RF key control board into the mainboard and press it down until it latch into place.

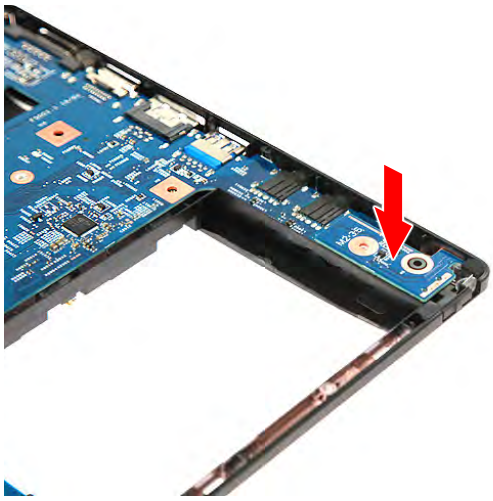


Figure 3-109. RF Key Control Board

2. Secure the RF key control board to the mainboard using one screw.

Figure 3-110. RF Key Control Board Screw

Table 3-110. Screw

Step	Screw	Quantity	Screw Type
RF Key Control Reassembly	M2 × L3.5	1	

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook.
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Replacing the Touchpad/Fingerprint Module

1. Attach a double-sided adhesive tape on the back side of the touchpad board. Position the board on the upper cover and press down to secure the board in place.

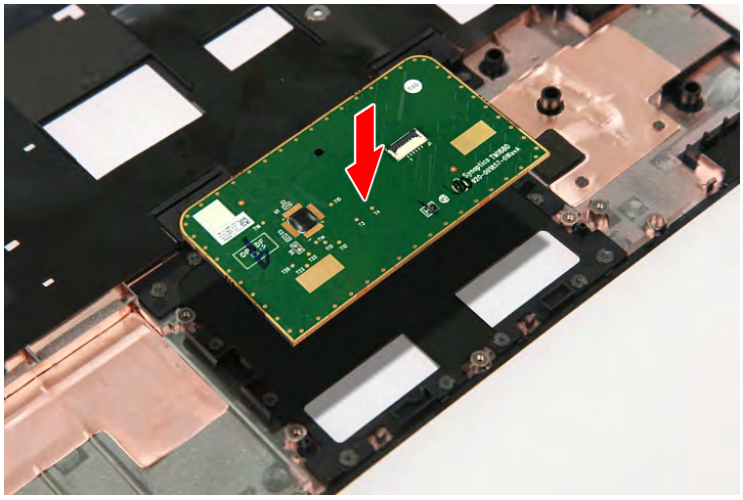


Figure 3-111. Touchpad Board

2. Attach a double-sided adhesive tape on the back side of the fingerprint board. Position the board on the upper cover and press down to secure the board in place.

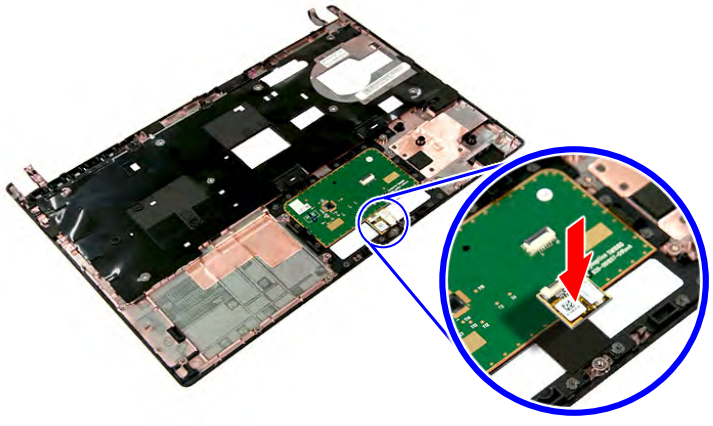


Figure 3-112. Fingerprint Board

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook.
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

3. Place the touchpad bracket into the upper case.

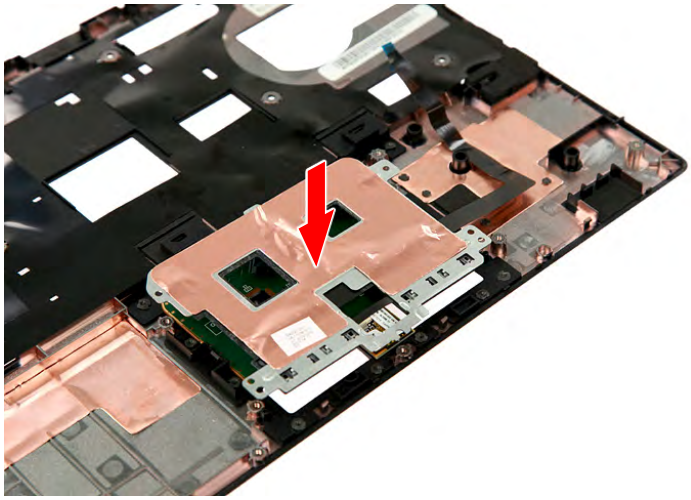


Figure 3-113. Touchpad Bracket

4. Secure the touchpad bracket to the upper case using four screws.

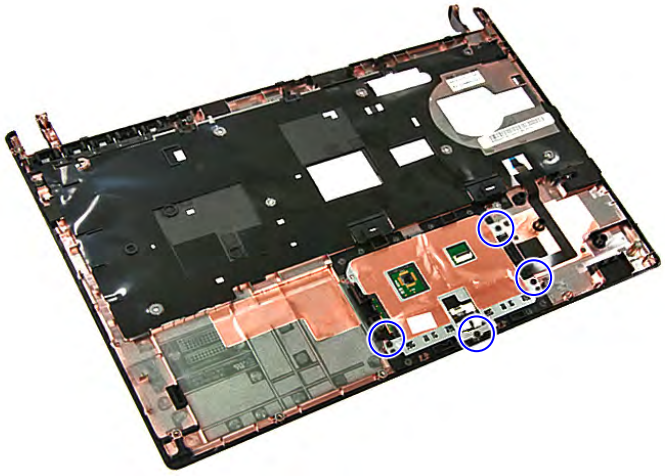


Figure 3-114. Touchpad Bracket Screws

Table 3-114. Screws

Step	Screw	Quantity	Screw Type
Touchpad Bracket Reassembly	M2 × L2.5	4	

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook.
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

5. Connect the touchpad cable to the board (**1**), then press the connector latch (**2**) until it locks into place.

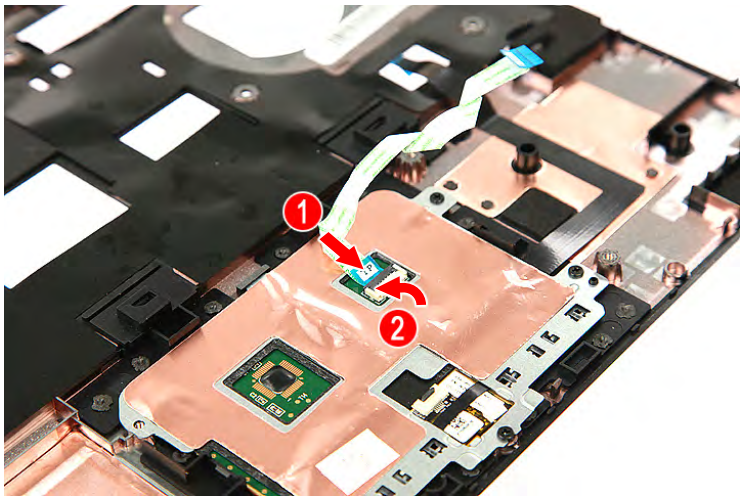


Figure 3-115. Touchpad Cable

6. Secure the touchpad cable to the upper case using self adhesive tape.

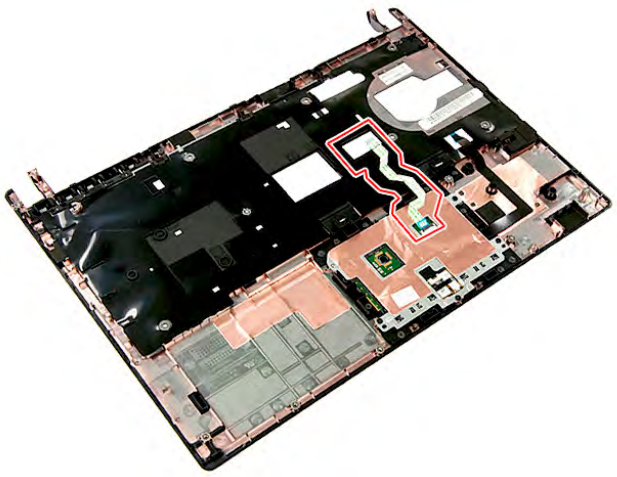


Figure 3-116. Touchpad Cable Self Adhesive Tape

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook.
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

7. Connect the fingerprint cable to the board (**1**) then press the connector latch (**2**) until it locks into place.

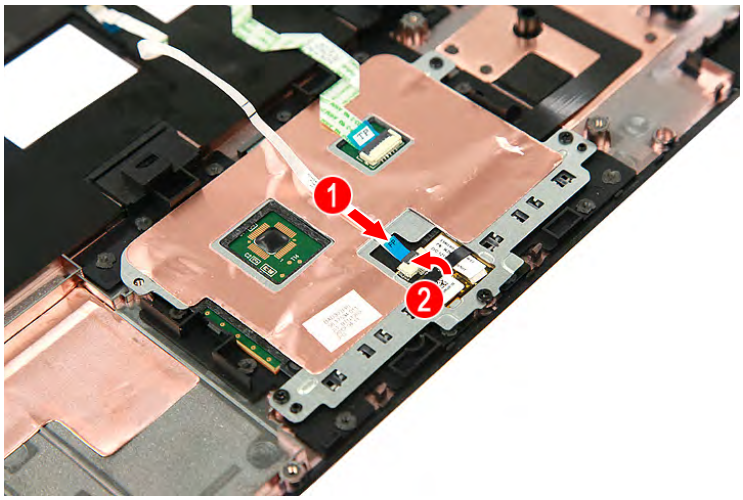


Figure 3-117. Fingerprint Cable

8. Secure the fingerprint cable to the upper case using self adhesive tape.

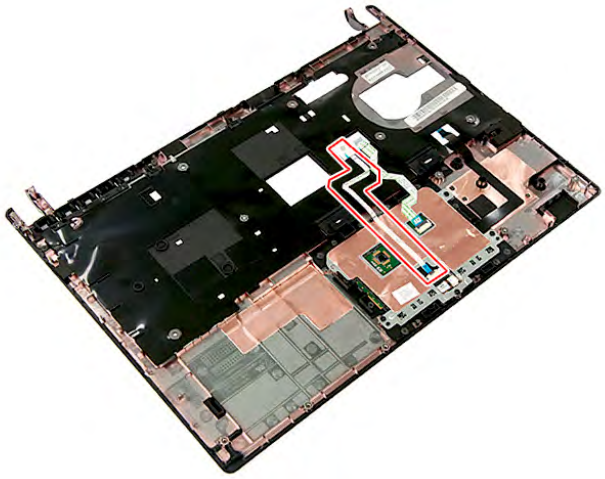


Figure 3-118. Fingerprint Cable Self Adhesive Tape

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

9. Place the pvc spacer into the upper case assembly and press it down until it latch into place.

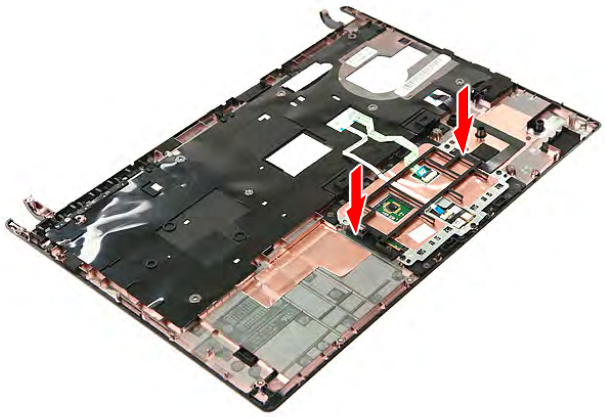


Figure 3-119. Touchpad/Fingerprint Module Spacer

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Replacing the Palmrest Module/Upper Case

1. Place the upper case into the lower case assembly then carefully press its sides downward until all the latches lock into place.

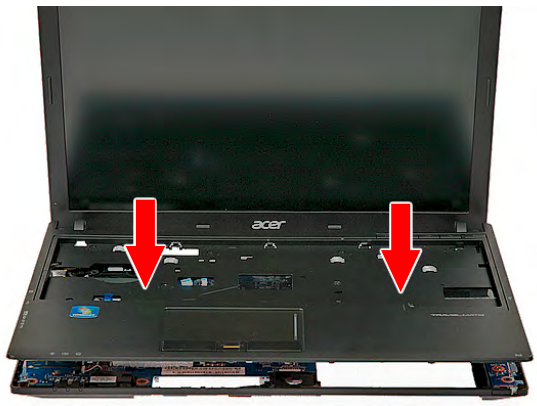


Figure 3-120. Upper Case

2. Turn the computer over to access the base side of the lower case assembly.
3. Secure the palm rest/upper case module to the lower case assembly using eight base side screws.

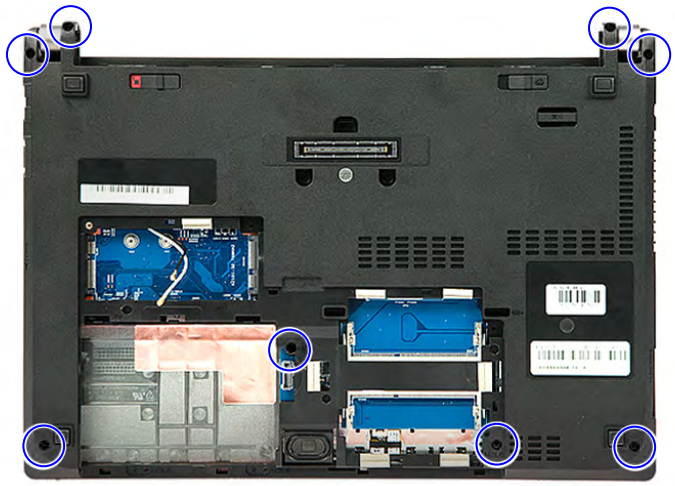


Figure 3-121. Upper Case Screws – Base Side

Table 3-121. Screws

Step	Screw	Quantity	Screw Type
Upper Case Reassembly	M2 × L6	8	

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

4. Turn the computer over and open the LCD panel.
5. Secure the palm rest/upper case module to the lower case assembly using seven top side screws.

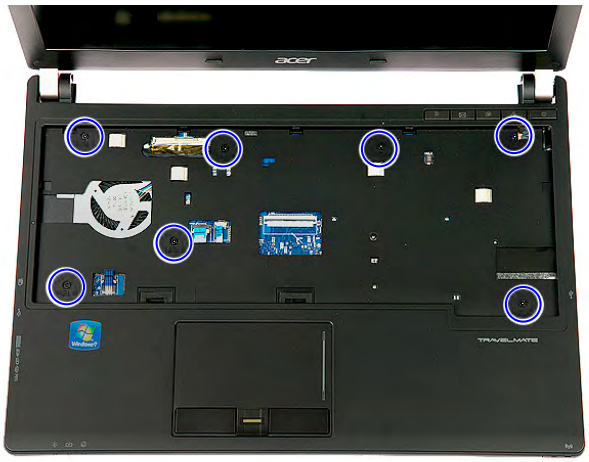


Figure 3-122. Upper Case Screws – Top Side

Table 3-122. Screws

Step	Screw	Quantity	Screw Type
Upper Case Reassembly	M2 × L6	7	

6. Connect the fingerprint cable to the mainboard (**1**) then press the connector latch (**2**) until it locks into place.

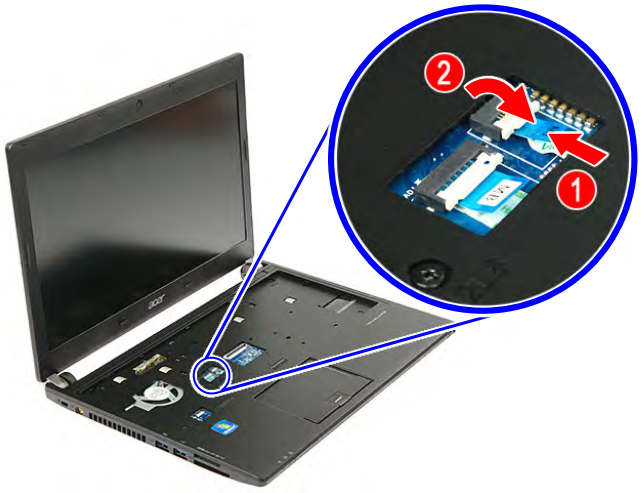


Figure 3-123. Fingerprint Board Cable

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook.
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

7. Connect the touchpad cable to the mainboard (**1**) then press the connector latch (**2**) until it locks into place.

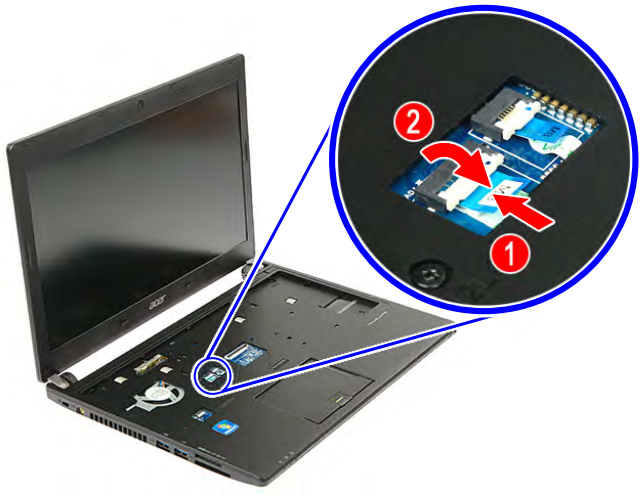


Figure 3-124. Touchpad Board Cable

8. Connect the RD1 cable to the mainboard (**1**) then press the connector latch (**2**) until it locks into place.

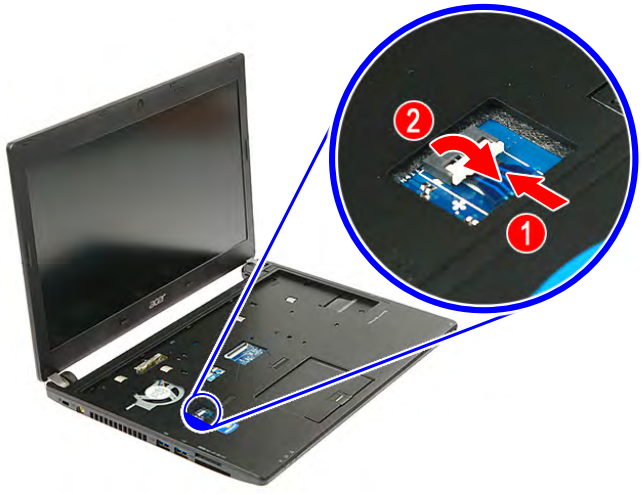


Figure 3-125. RD1 Board Cable

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

External Module Reassembly Process

Replacing the Keyboard

1. Place the keyboard into the palmrest (**1**).
2. Connect the keyboard cable to the mainboard (**2**) then press the connector latch (**3**) until it locks into place.

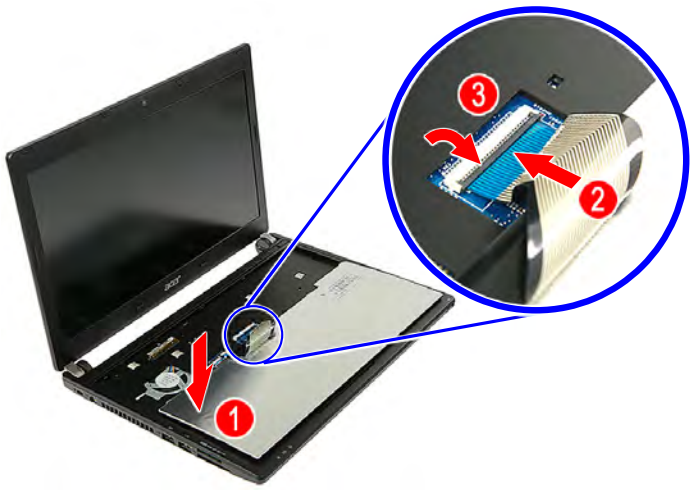


Figure 3-126. Keyboard Cable

3. Gently turn the keyboard over and carefully place it into its slot in the upper case assembly.

Figure 3-127. Keyboard

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook.
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

4. Gently push the keyboard downward until the latches on the top side of the keyboard lock into place.

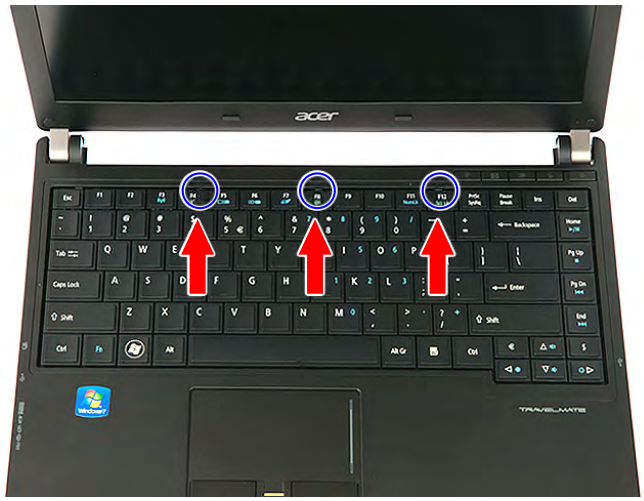


Figure 3-128. Keyboard Latches

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Replacing the DIMM Modules

1. Insert the DIMM module into the DIMM slot (**1**), then press it down until it latch into place (**2**).

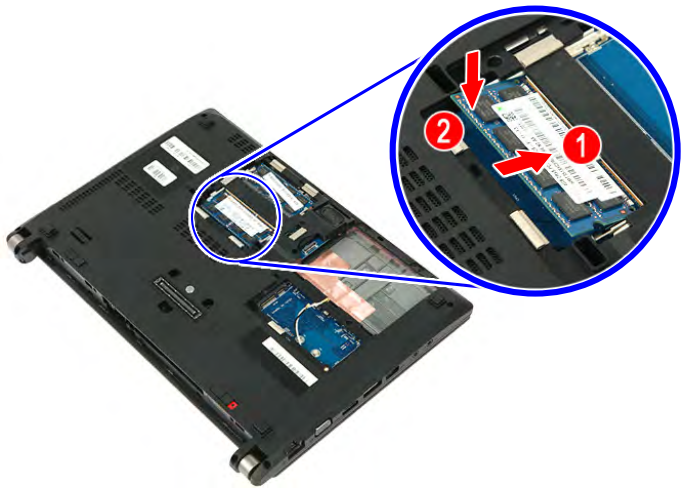


Figure 3-129. DIMM Modules

2. Repeat Step 1 to install the remaining DIMM module.

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Replacing the WLAN Module

1. Insert the WLAN module into its the slot in the mainboard.

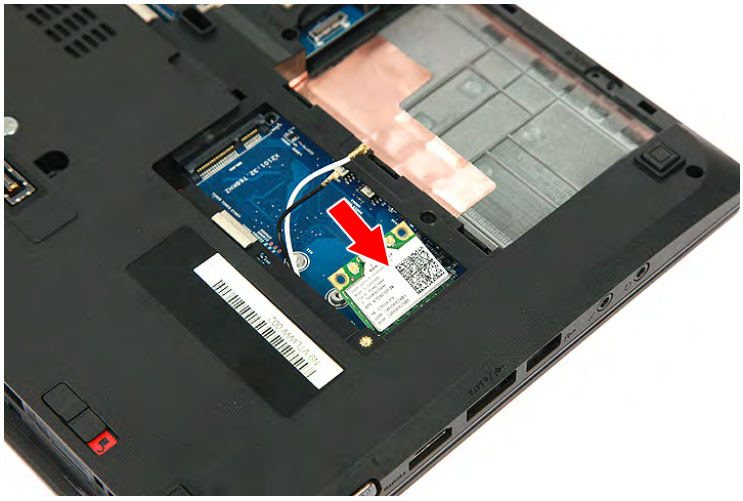


Figure 3-130. WLAN Module

2. Secure the WLAN module to the mainboard using one screw.

Figure 3-131. WLAN Module Screw

Table 3-131. Screw

Step	Screw	Quantity	Screw Type
WLAN Module Reassembly	M2 × L3.5	1	

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook.
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

3. Connect the main and auxiliary antenna cables to the WLAN module.

IMPORTANT:

The main antenna cable (black) should be attached to connector near the module screw; the auxiliary antenna cable (white) should be attached to the connector near the lower case cable opening.

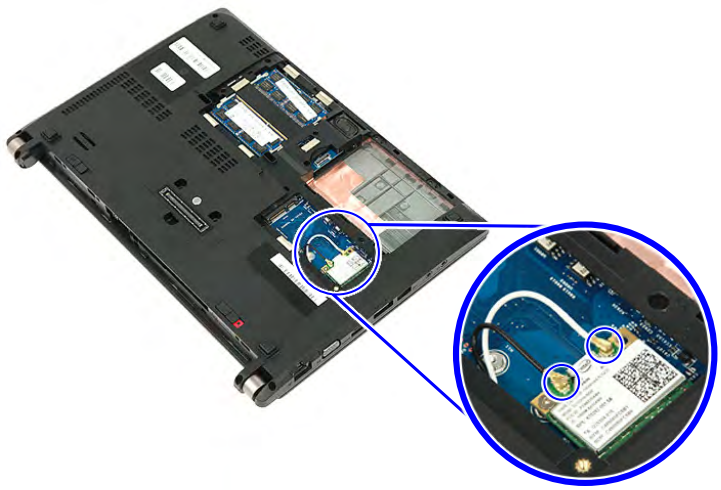


Figure 1-132. WLAN Module Antennas

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook.
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Replacing the HDD Module

1. Connect the HDD adapter cable to the HDD.

Figure 3-133. HDD Adapter Cable

2. Insert the HDD into HDD rubber holder (**1**) and stretch the holder over the rest of the HDD (**2**) so that all the corners of the HDD are covered.

Figure 3-134. HDD Rubber Holder

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook.
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

3. Secure the HDD rubber holder to the HDD using self adhesive tape.

Figure 3-135. HDD Module Self Adhesive Tape

4. Place the HDD module into the lower case assembly.

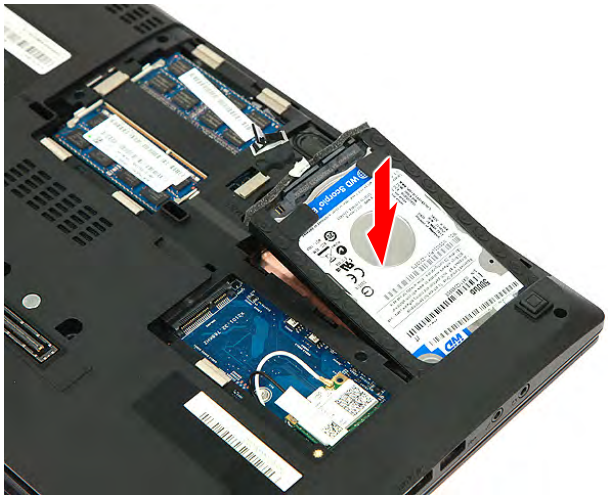


Figure 3-136. HDD Module

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook.
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

5. Insert the HDD bracket into the lower case assembly (**1**), then gently lower it over the HDD assembly (**2**).

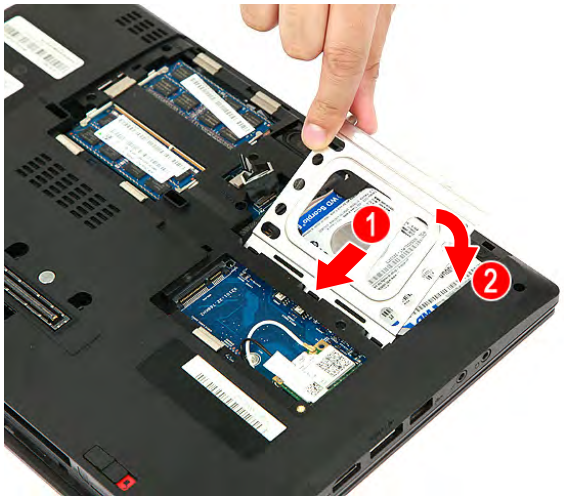


Figure 3-137. HDD Bracket

6. Secure the HDD bracket to the lower case assembly using two screws.

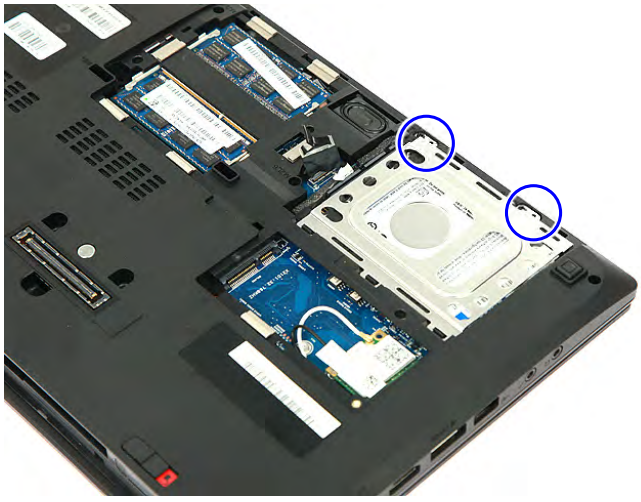


Figure 3-138. HDD Bracket Screws

Table 3-138. Screws

Step	Screw	Quantity	Screw Type
HDD Module Reassembly	M2 × L6	2	

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook.
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

7. Connect the HDD cable to the mainboard.

Figure 3-139. HDD Cable

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook.
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Replacing the Base Door

1. Insert the tabs on the base door into the slots on the lower case (**1**) and then press down the base door until it latch into place (**2**).

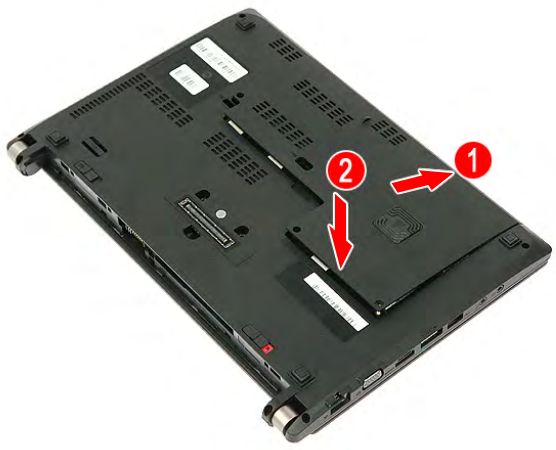


Figure 3-140. Base Door

2. Secure the base door to the lower case assembly using three screws.

Figure 3-141. Base Door Screws

Table 3-141. Screws

Step	Screw	Quantity	Screw Type
Base Door Reassembly	M2 × L6	3	

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Replacing the Battery Pack

1. Insert the battery pack (**1**) until it latch into place, then slide the battery lock to the lock position (**2**).

Figure 3-142. Battery Pack

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

CHAPTER 4

Troubleshooting

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

General Information 4-3
Power On Issues 4-4
No Display Issues 4-5
LCD Failure 4-7
Keyboard Failure 4-8
Touchpad Failure 4-9
Internal Speaker Failure 4-10
Microphone Failure 4-12
USB Failure 4-13
WLAN Failure 4-14
Bluetooth Failure 4-15
Card Reader Failure 4-16
Thermal Unit Failure 4-17
Other Functions Failure 4-18

Intermittent Problems 4-19

Undetermined Problems 4-19

Error Codes 4-20

BIOS Beep Codes 4-21

POST Codes 4-26
Component Codes 4-26
Progress Codes 4-30

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Troubleshooting

This chapter contains information about troubleshooting common problems associated with the computer.

General Information

The following procedures are a guide for troubleshooting computer problems. The step by step procedures are designed to be performed as described.

NOTE:
The diagnostic tests are intended for Acer products only. Non-Acer products, prototype cards, or modified options can give false errors and invalid system responses.

1. Obtain as much detailed information as possible about the problem.
2. If possible, verify the symptoms by re-creating the failure through diagnostic tests or repeating the operation that led to the problem.
3. Refer to Table 4-1 for a list of verified symptom category to determine the solution.

Table 4-1. Common Problems

Symptoms (Verified)
Power On Issues
No Display Issues
LCD Failure
Keyboard Failure
Touchpad Failure
Internal Speaker Failure
Microphone Failure
USB Failure
WLAN Failure
Bluetooth Failure
Card Reader Failure
Thermal Unit Failure
Other Functions Failure
Intermittent Problems
Undetermined Problems

4. If the issue is still not resolved, refer to the Online Support Information on page 8-3.

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Power On Issues

If the system does not power on, perform the following, one at a time, to correct the problem. Do not replace a non-defective FRU.

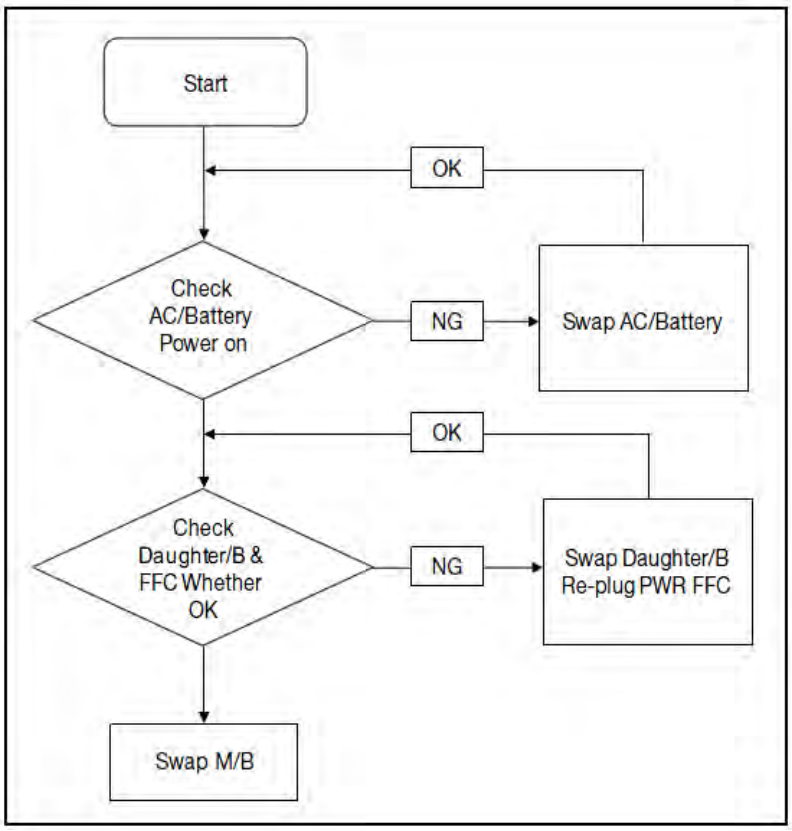


Figure 4-1. Power On Issue

Computer Shuts Down Intermittently

If the system powers off at intervals, perform the following.

1. Makes sure the power cable is properly connected to the computer and the electrical outlet.
2. Remove all extension cables between the computer and the outlet.
3. Remove all surge protectors between the computer and the electrical outlet. Plug the computer directly into a known serviceable electrical outlet.
4. Disconnect the power and open the casing to check the thermal module and fan airways are free of obstructions. Refer to the to the “Thermal Unit Failure” section on page 4-17.
5. Remove all external and non-essential hardware connected to the computer that are not necessary to boot the computer to the failure point.
6. Remove any recently installed software.
7. If the issue is still not resolved, refer to the Online Support Information on page 8-3.

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

No Display Issues

If the Display does not work, perform the following, one at a time. Do not replace a non-defective FRU:

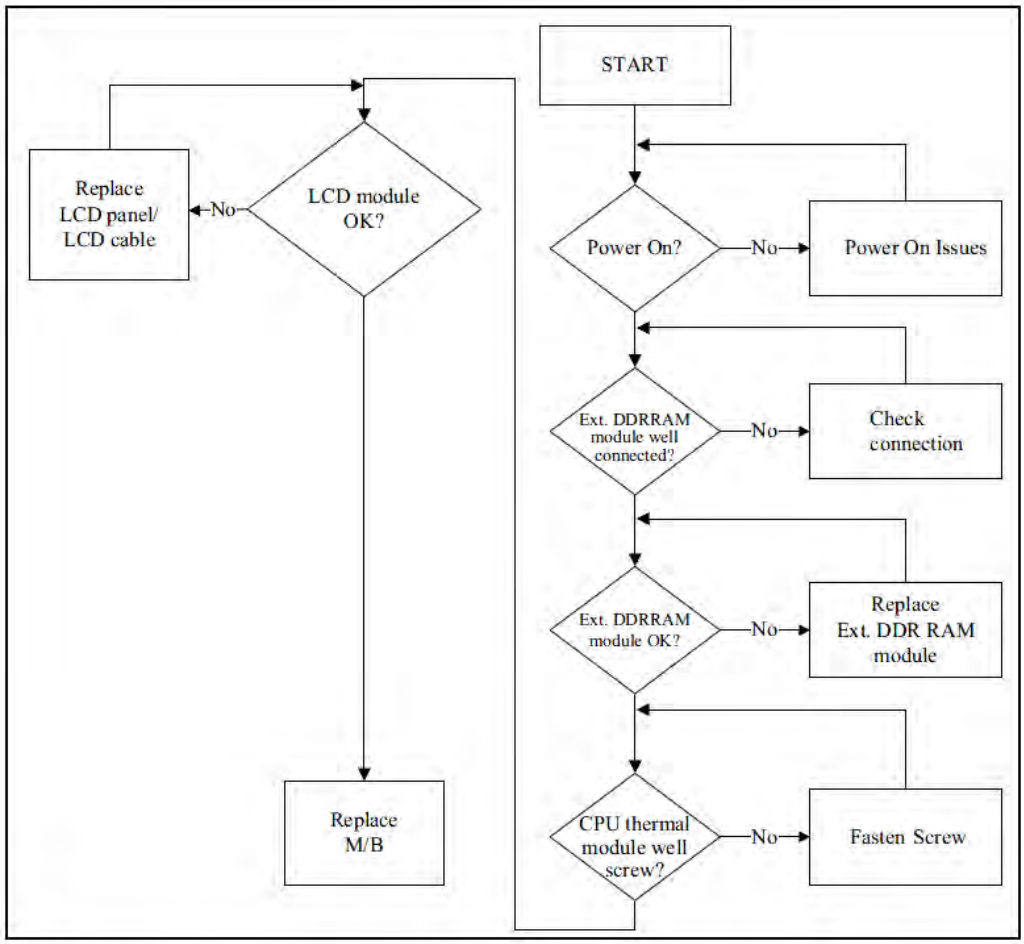


Figure 4-2. No Display Issue

No POST or Video

If the POST or video does not appear, perform the following one at a time.

1. Make sure that internal display is selected. Switch between the internal and external display by pressing ***Fn***+***F5***.

NOTE:

This hotkey may not apply to all models. Refer to the computer's user manual for the applicable hotkey sequence.

2. Make sure the computer has power by checking for one of the following:
   - Fans start up
   - Status LEDs illuminate

   If there is no power, refer to the "Power On Issues" section on page 4-4.

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

3. Drain stored power by removing the power cable and the battery pack. Hold the power button for 10 seconds.
4. Connect the power cable and reboot the computer.
5. Connect an external monitor to the computer and switch between the internal display and the external display by pressing ***Fn***+***F5***.
6. If the POST or video appears on the external display only, refer to the "LCD Failure" section on page 4-7.
7. Disconnect power and all external devices including port replicators or docking stations.
8. Remove any memory cards installed.
9. Start the computer. If the computer boots correctly, add the devices one by one until the failure point is discovered.
10. Reseat the memory modules.
11. Perform the "Removing the HDD Module" procedure described on pages 3-11.
12. If the issue is still not resolved, refer to the Online Support Information on page 8-3.

Abnormal Video

If the video appears abnormal, perform the following one at a time.

1. Boot the computer.

   If permanent vertical/horizontal lines or dark spots appear in the same location, the LCD panel is faulty and should be replaced. The same goes for when there is extensive pixel damage (i.e. different colored spots in the same locations on the screen). Perform the "Removing the LCD Module" and "Removing the Microphone" procedures described on pages 3-40 and 3-46 respectively.

NOTE:
Make sure that the computer is not running on battery alone as this may reduce display brightness.

2. Adjust the brightness to its highest level. Refer to the User Manual for instructions on adjusting the settings. If the display is too dim at the highest brightness setting, the LCD is faulty and should be replaced. Refer to Disassembly Process.
3. Check the display resolution is correctly configured:
   - Minimize or close all Windows.
   - If display size is only abnormal in an application, check the view settings and control/mouse wheel zoom feature in the application.
   - If desktop display resolution is not normal, right-click on the desktop and select `Personalize Display Settings`.
   - Click and drag the Resolution slider to the desired resolution.
   - Click **Apply** and check the display. Readjust if necessary.
4. Roll back the video driver to the previous version if updated.
5. Remove and reinstall the video driver.
6. Check the Device Manager to determine that:
   - The device is properly installed. There are no red Xs or yellow exclamation marks
   - There are no device conflicts
   - No hardware is listed under `Other Devices`

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

7. If the issue is still not resolved, refer to the Online Support Information on page 8-3.
8. Run the Windows Memory Diagnostic from the operating system DVD and follow the on-screen prompts.
9. If the issue is still not resolved, refer to the Online Support Information on page 8-3.

LCD Failure

If the LCD fails, perform the following, one at a time. Do not replace a non-defective FRU:

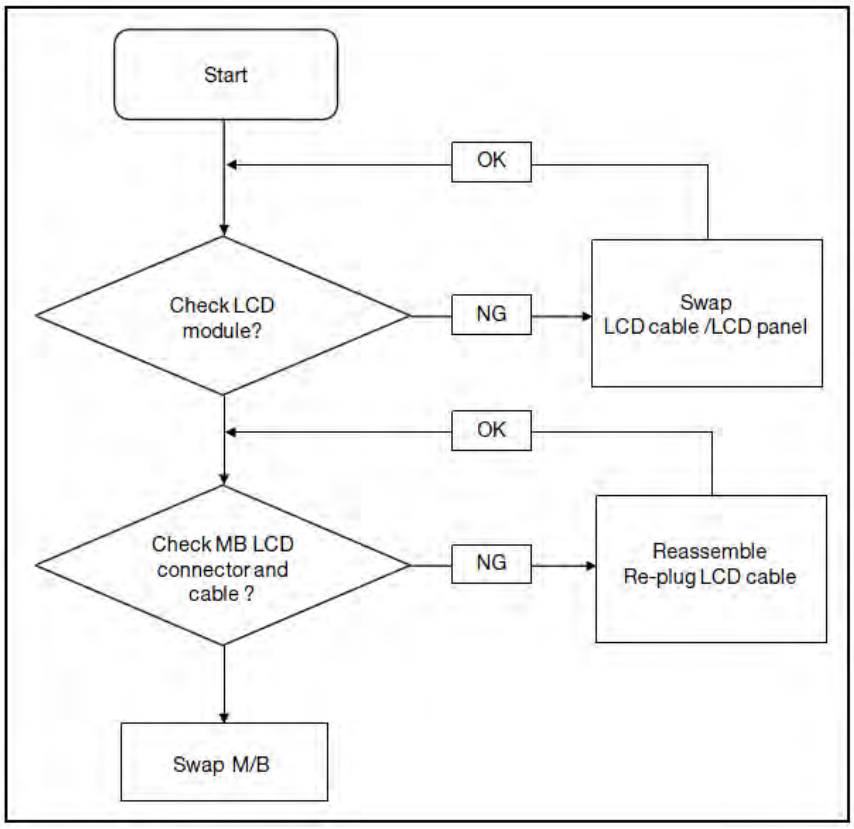


Figure 4-3. LCD Failure

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Keyboard Failure

If the Keyboard fails, perform the following, one at a time. Do not replace a non-defective FRU:

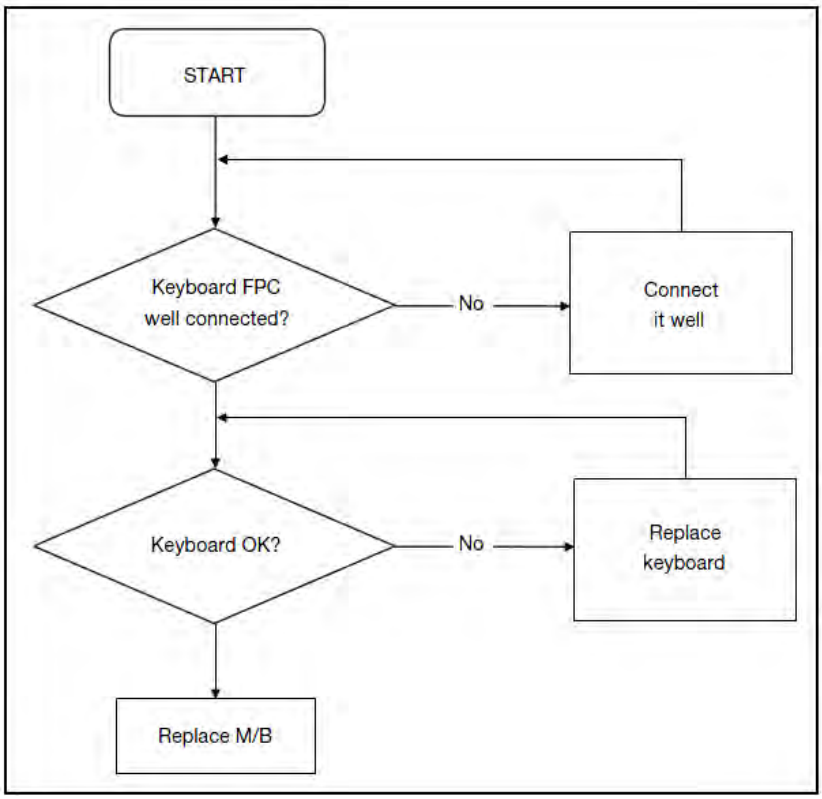


Figure 4-4. Keyboard Failure

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Touchpad Failure

If the Touchpad fails, perform the following, one at a time. Do not replace a non-defective FRU:

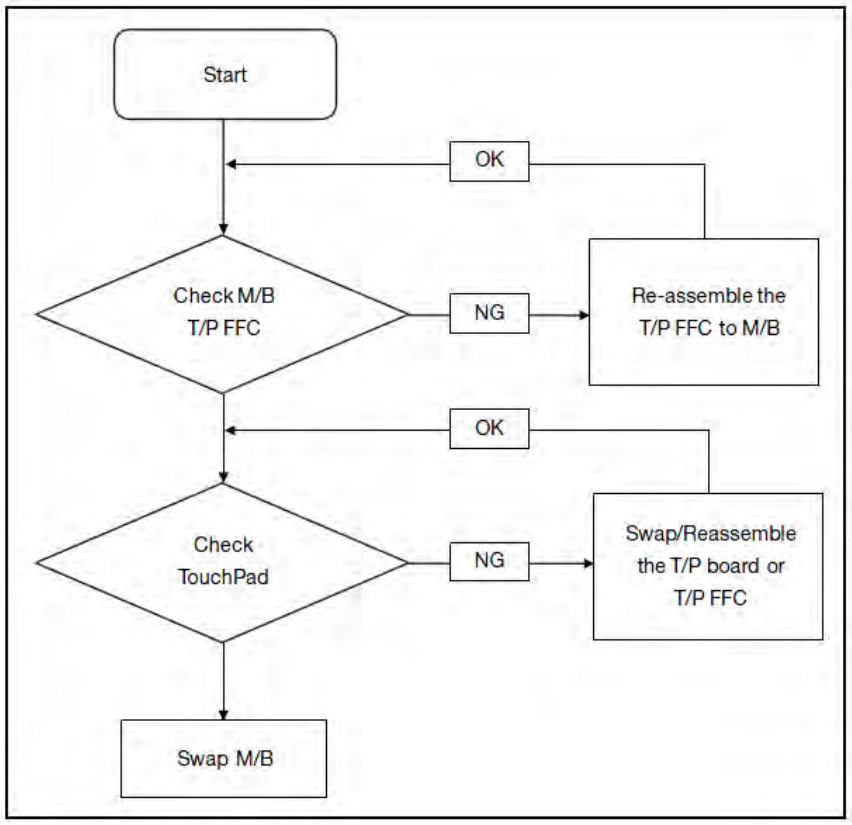


Figure 4-5. Touchpad Failure

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Internal Speaker Failure

If internal Speakers fail, perform the following, one at a time. Do not replace a non-defective FRU:

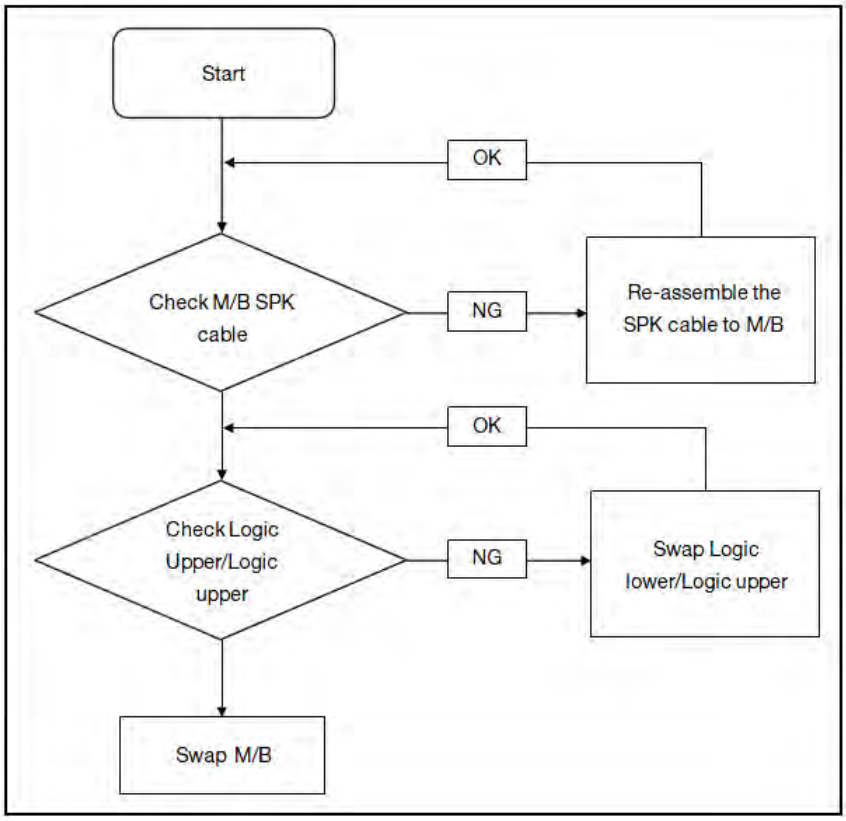


Figure 4-6. Internal Speaker Failure

Sound Problems

Perform the following, one at a time.

1. Boot the computer.
2. Navigate to Start .. Control Panel → System and Maintenance → System → Device Manager. Check the Device Manager to determine that:
   - The device is properly installed
   - There are no red Xs or yellow exclamation marks
   - There are no device conflicts
   - No hardware is listed under Other Devices
3. If updated recently, roll back the audio driver to the previous version.
4. Remove and reinstall the audio driver.
5. Make sure that all volume controls are set mid range:
   - Click the volume icon on the task bar

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

- Drag the slider to 50. Confirm that the volume is not muted.
- Click Mixer to verify that other audio applications are set to 50 and not muted.

6. Navigate to Start → Control Panel → Hardware and Sound → Sound. Confirm that Speakers are selected as the default audio device (green check mark).

NOTE:

If Speakers do not show, right-click on the `Playback` tab and select `Show Disabled Devices` (clear by default).

7. Select Speakers and click Configure to start `Speaker Setup`. Follow the on-screen prompts to configure the speakers.
8. Remove any recently installed hardware or software.
9. Restore system and file settings from a known good date using `System Restore`.
10. If the issue is remains, repeat step 9, selecting an earlier time and date.
11. Reinstall the Operating System.
12. If the issue is still not resolved, refer to the Online Support Information on page 8-3.

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Microphone Failure

If internal or external Microphones fail, perform the following, one at a time.

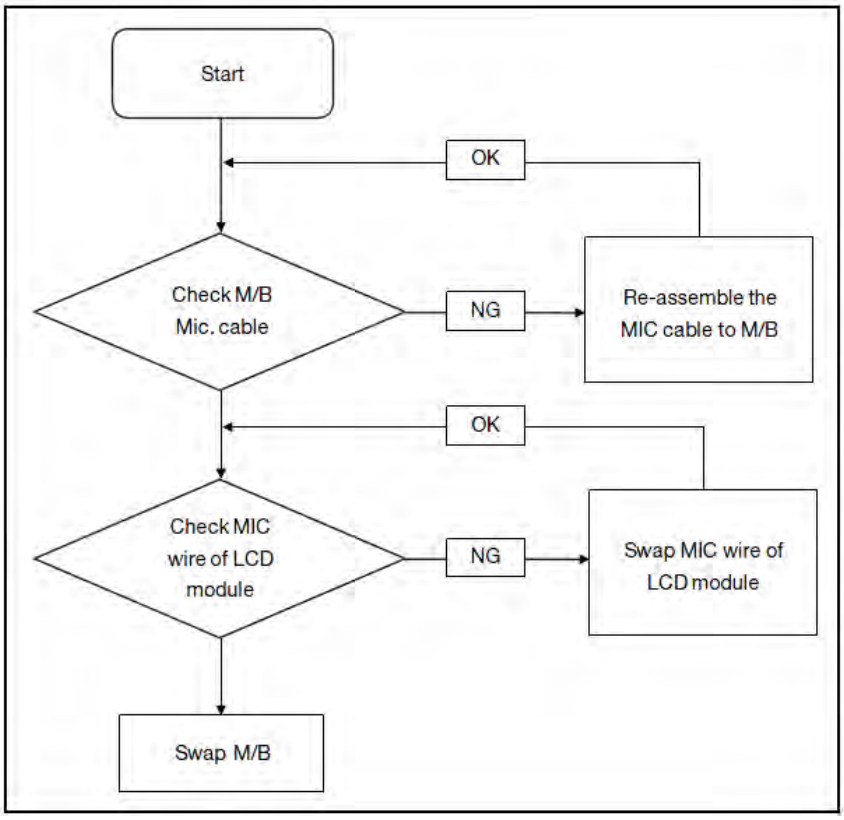


Figure 4-7. Microphone Failure

1. Check that the microphone is enabled. Navigate to Start → Control Panel → Hardware and Sound → Sound and select the `Recording` tab.
2. Right click on the `Recording` tab and select `Show Disabled Devices` (clear by default). The microphone appears on the `Recording` tab.
3. Right click on the microphone and select **Enable**.
4. Select the microphone then click **Properties**. Select the `Levels` tab.
5. Increase the volume to the maximum setting and click **OK**.
6. Test the microphone hardware:
   - Select the microphone and click **Configure**.
   - Select **Set up microphone**.
   - Select the microphone type from the list and click **Next**.
   - Follow the on-screen prompts to complete the test.
7. If the issue is still not resolved, refer to the Online Support Information on page 8-3.

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

USB Failure

If the USB fails, perform the following, one at a time. Do not replace a non-defective FRU:

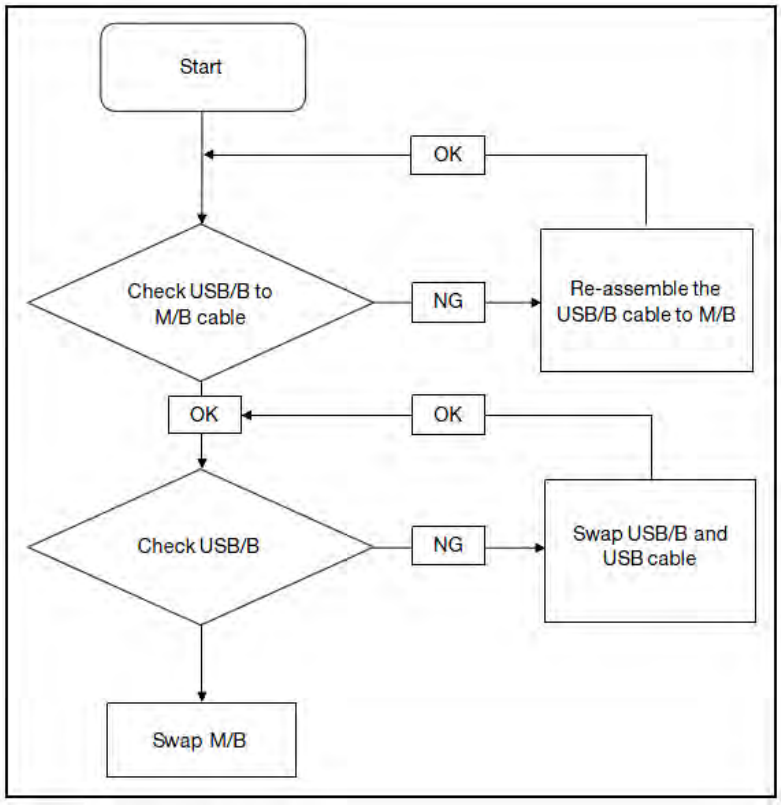


Figure 4-8. USB Failure

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

WLAN Failure

If the WLAN fails, perform the following, one at a time. Do not replace a non-defective FRU:

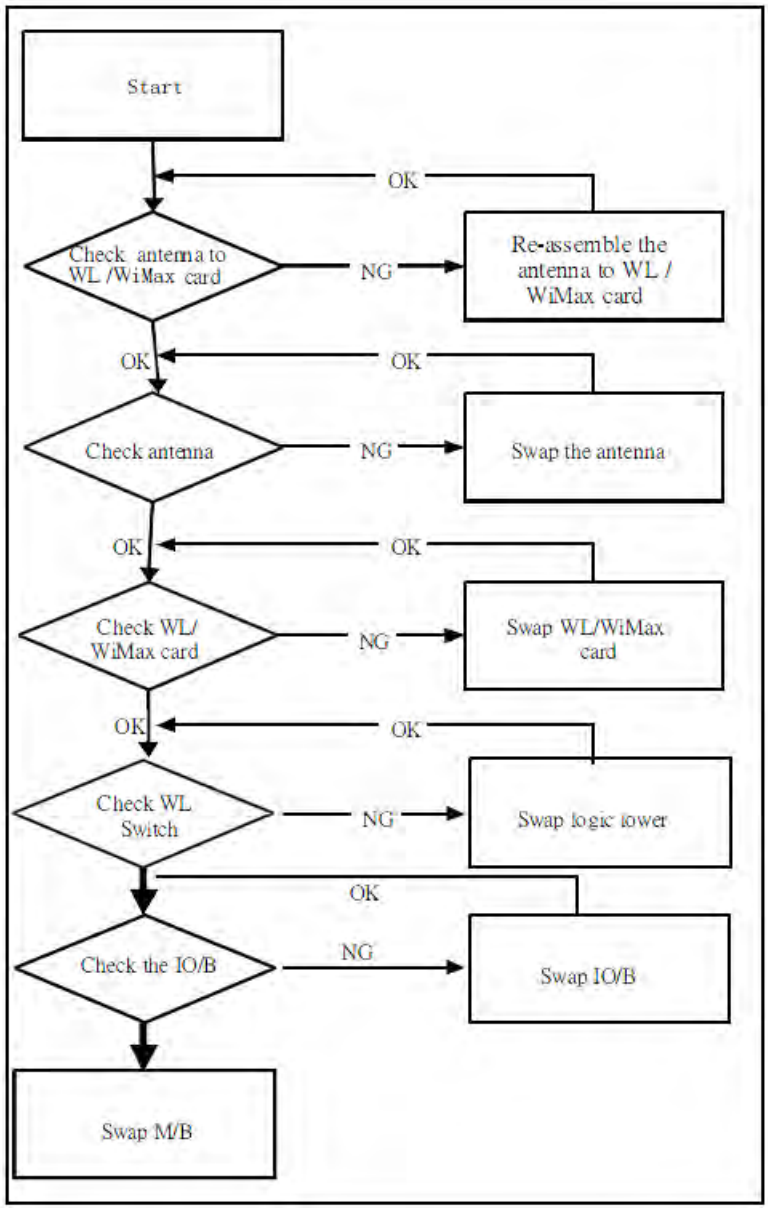


Figure 4-9. WLAN Failure

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Bluetooth Failure

If the Bluetooth fails, perform the following, one at a time. Do not replace a non-defective FRU:

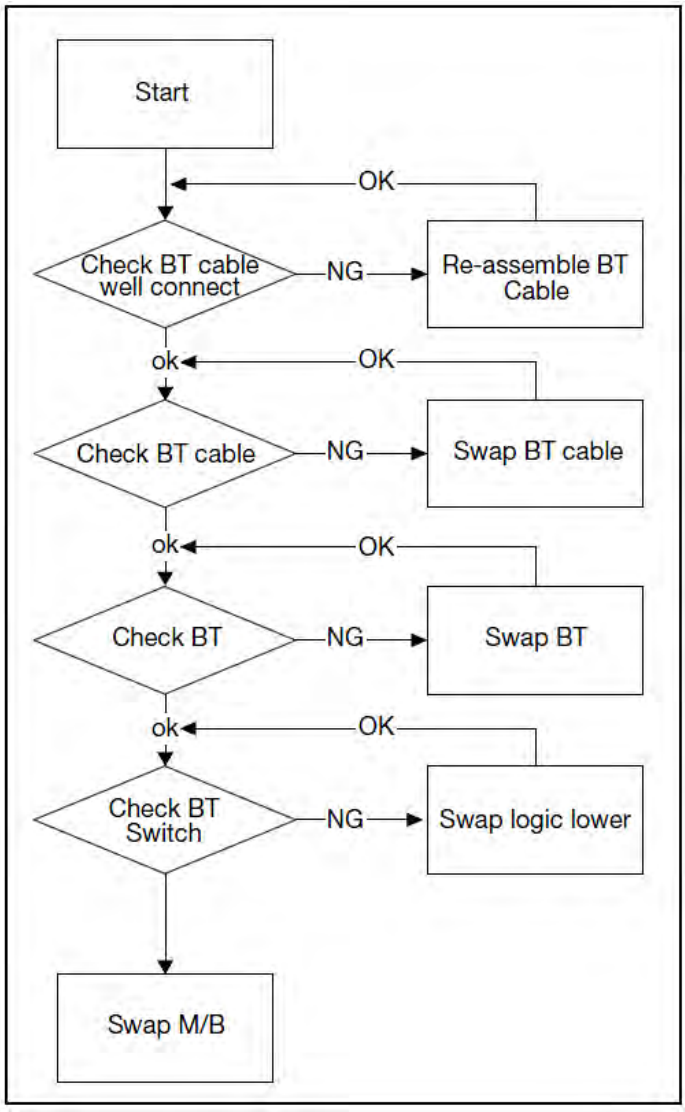


Figure 4-10. Bluetooth Failure

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Card Reader Failure

If the Card Reader fails, perform the following, one at a time. Do not replace a non-defective FRU:

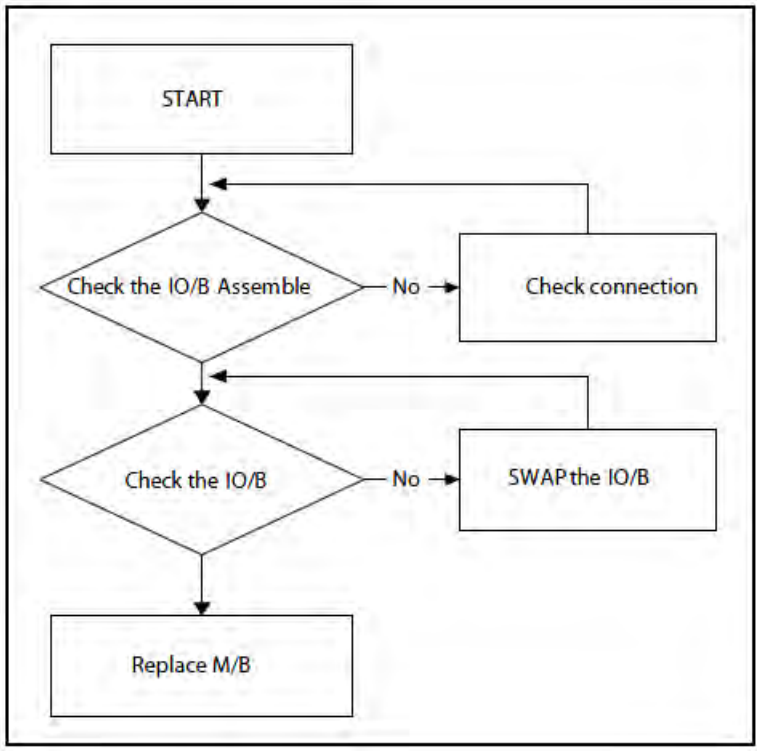


Figure 4-11. Card Reader Failure

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Thermal Unit Failure

If the Thermal Unit fails, perform the following, one at a time. Do not replace a non-defective FRU:

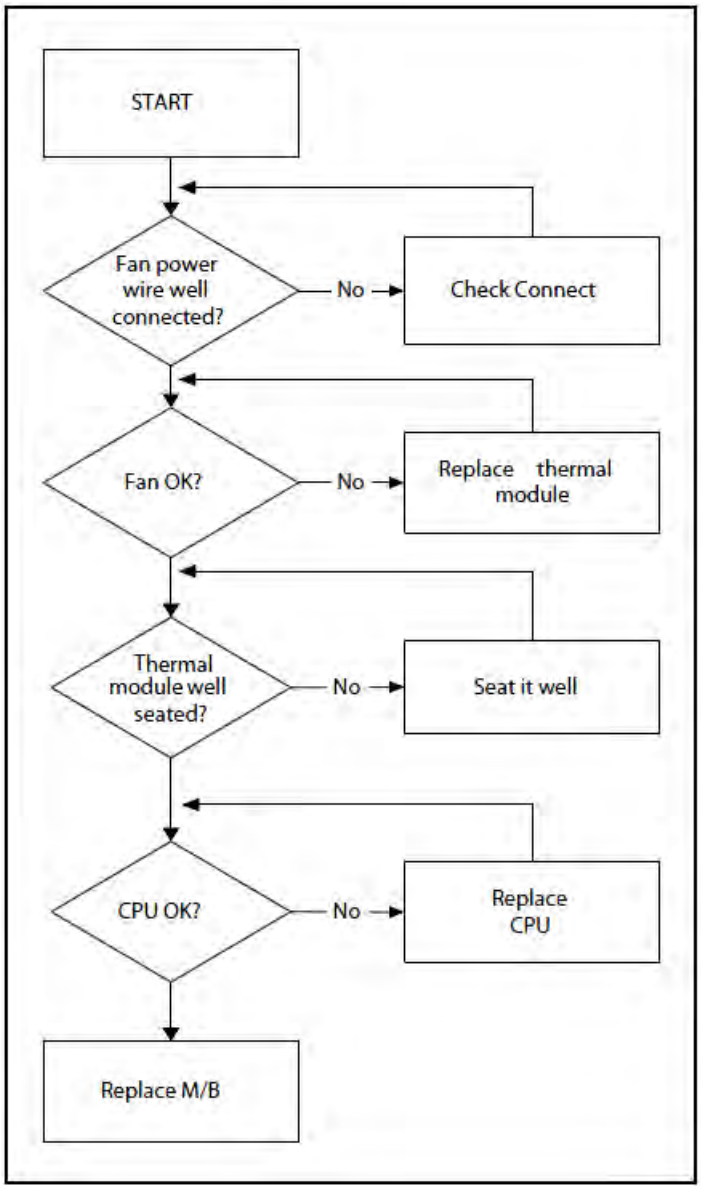


Figure 4-12. Thermal Unit Failure

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Other Functions Failure

1. Check if drives are functioning correctly.
2. Check if external modules are functioning correctly.
3. Change mainboard to check if current one is defective.

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Intermittent Problems

Intermittent system hang problems can be caused by a variety of reasons that have nothing to do with a hardware defect, such as: cosmic radiation, electrostatic discharge, or software errors. FRU replacement should be considered only when a recurring problem exists.

When analyzing an intermittent problem, perform the following:

1. Run the advanced diagnostic test for the system board in loop mode at least 10 times.
2. If no error is detected, do not replace any FRU.
3. If an error is detected, replace the FRU. Rerun the test to verify that there are no more errors.

Undetermined Problems

The diagnostic problems does not identify which adapter or device failed, which installed devices are incorrect, whether a short circuit is suspected, or whether the system is inoperative.

Perform the following procedures to isolate the failing FRU (do not isolate non-defective FRU).

NOTE:
Verify that all attached devices are supported by the computer.

NOTE:
Verify that the power supply being used at the time of the failure is operating correctly.

1. Remove power from the computer.
2. Visually check the components for damage. If any problems are found, replace the FRU.
3. Remove or disconnect all of the following devices:
   - Non-Acer devices
   - Printer, mouse, and other external devices
   - Battery pack
   - Hard disk drive
   - DIMM
   - CD-ROM/Diskette drive Module
   - PC Cards
4. Apply power to the computer.
5. Determine if the problem has changed.
6. If the problem does not recur, connect the removed devices one at a time until failing FRU is found.
7. If the problem remains, replace the following FRUs one at a time. Do not replace a non-defective FRU:
   - Mainboard
   - LCD assembly

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Error Codes

Table 4-2. Error Codes

Error Codes	Error Messages
006	Equipment Configuration Error Causes: 1. CPU BIOS Update Code Mismatch 2. IDE Primary Channel Master Drive Error (The causes will be shown before “Equipment Configuration Error”)
010	Memory Error at xxxx:xxxx:xxxxh (R:xxxxh, W:xxxxh)
070	Real Time Clock Error
071	CMOS Battery Bad
072	CMOS Checksum Error
110	System is disabled. An incorrect password was entered.
<No error code>	Battery critically low. In this situation BIOS will issue four (4) short beeps, then shuts the system down. No message is displayed.
<No error code>	Temperature is critically high. In this situation BIOS shuts the system down. No message is displayed.

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

BIOS Beep Codes

Table 4-3. BIOS Beep Codes

Code	Beeps	POST Routine Description
02h		Verify Real Mode
03h		Disable Non-Maskable Interrupt (NMI)
04h		Get CPU type
06h		Initialize system hardware
08h		Initialize chipset with initial POST values
09h		Set IN POST flag
0Ah		Initialize CPU registers
0Bh		Enable CPU cache
0Ch		Initialize caches to initial POST values
0Eh		Initialize I/O component
0Fh		Initialize the local bus IDE
10h		Initialize Power Management
11h		Load alternate registers with initial POST values
12h		Restore CPU control word during warm boot
13h		Initialize PCI Bus Mastering devices
14h		Initialize keyboard controller
16h	1-2-2-3	BIOS ROM checksum
17h		Initialize cache before memory autosize
18h		8254 timer initialization
1Ah		8237 DMA controller initialization
1Ch		Reset Programmable Interrupt Controller
20h	1-3-1-1	Test DRAM refresh
22h	1-3-1-3	Test 8742 Keyboard Controller
24h		Set ES segment register to 4 GB
26h		Enable A20 line
28h		Autosize DRAM
29h		Initialize POST Memory Manager
2Ah		Clear 215 KB base RAM
2Ch	1-3-4-1	RAM failure on address line xxxx
2Eh	1-3-4-3	RAM failure on data bits xxxx of low byte of memory bus

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Table 4-3. BIOS Beep Codes

Code	Beeps	POST Routine Description
2Fh		Enable cache before system BIOS shadow
30h	1-4-1-1	RAM failure on data bits xxxx of high byte of memory bus
32h		Test CPU bus-clock frequency
33h		Initialize Phoenix Dispatch Manager
36h		Warm start shut down
38h		Shadow system BIOS ROM
3Ah		Autosize cache
3Ch		Advanced configuration of chipset registers
3Dh		Load alternate registers with CMOS values
42h		Initialize interrupt vectors
45h		POST device initialization
46h	2-1-2-3	Check ROM copyright notice
48h		Check video configuration against CMOS
49h		Initialize PCI bus and devices
4Ah		Initialize all video adapters in system
4Bh		QuietBoot start (optional)
4Ch		Shadow video BIOS ROM
4Eh		Display BIOS copyright notice
50h		Display CPU type and speed
51h		Initialize EISA board
52h		Test keyboard
54h		Set key click if enabled
58h	2-2-3-1	Test for unexpected interrupts
59h		Initialize POST display service
5Ah		Display prompt “Press F2 to enter SETUP”
5Bh		Disable CPU cache
5Ch		Test RAM between 512 and 640 KB
60h		Test extended memory
62h		Test extended memory address lines
64h		Jump to User Patch1
66h		Configure advanced cache registers
67h		Initialize Multi Processor APIC
68h		Enable external and CPU caches

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Table 4-3. BIOS Beep Codes

Code	Beeps	POST Routine Description
69h		Setup System Management Mode (SMM) area
6Ah		Display external L2 cache size
6Bh		Load custom defaults (optional)
6Ch		Display shadow-area message
6Eh		Display possible high address for UMB recovery
70h		Display error messages
72h		Check for configuration errors
76h		Check for keyboard errors
7Ch		Set up hardware interrupt vectors
7Eh		Initialize coprocessor if present
80h		Disable onboard Super I/O ports and IRQs
81h		Late POST device initialization
82h		Detect and install external RS232 ports
83h		Configure non-MCD IDE controllers
84h		Detect and install external parallel ports
85h		Initialize PC-compatible PnP ISA devices
86h		Re-initialize onboard I/O ports
87h		Configure Motherboard Configurable Devices (optional)
88h		Initialize BIOS Area
89h		Enable Non-Maskable Interrupts (NMIs)
8Ah		Initialize Extended BIOS Data Area
8Bh		Test and initialize PS/2 mouse
8Ch		Initialize floppy controller
8Fh		Determine number of ATA drives (optional)
90h		Initialize hard-disk controllers
91h		Initialize local-bus hard-disk controllers
92h		Jump to UserPatch2
93h		Build MPTABLE for multi-processor boards
95h		Install CD ROM for boot
96h		Clear huge ES segment register
97h		Fixup Multi Processor table
98h	1-2	Search for option ROMs. One long, two short beeps on checksum failure.

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Table 4-3. BIOS Beep Codes

Code	Beeps	POST Routine Description
99h		Check for SMART drive (optional)
9Ah		Shadow option ROMs
9Ch		Set up Power Management
9Dh		Initialize security engine (optional)
9Eh		Enable hardware interrupts
9Fh		Determine number of ATA and SCSI drives
A0h		Set time of day
A2h		Check key lock
A4h		Initialize Typematic rate
A8h		Erase F2 prompt
AAh		Scan for F2 key stroke
ACh		Enter SETUP
AEh		Clear Boot flag
B0h		Check for errors
B2h		POST done- prepare to boot operating system
B4h	1	One short beep before boot
B5h		Terminate QuietBoot (optional)
B6h		Check password (optional)
B9h		Prepare Boot
BAh		Initialize DMI parameters
BBh		Initialize PnP Option ROMs
BCh		Clear parity checkers
BDh		Display MultiBoot menu
BEh		Clear screen (optional)
BFh		Check virus and backup reminders
C0h		Try to boot with INT 19
C1h		Initialize POST Error Manager (PEM)
C2h		Initialize error logging
C3h		Initialize error display function
C4h		Initialize system error handler
C5h		PnPnd dual CMOS (optional)
C6h		Initialize notebook docking (optional)
C7h		Initialize notebook docking late

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Table 4-3. BIOS Beep Codes

Code	Beeps	POST Routine Description
C8h		Force check (optional)
C9h		Extended checksum (optional)
D2h		Unknown interrupt
E0h		Initialize the chipset
E1h		Initialize the bridge
E2h		Initialize the CPU
E3h		Initialize the system timer
E4h		Initialize system I/O
E5h		Check force recovery boot
E6h		Checksum BIOS ROM
E7h		Go to BIOS
E8h		Set Huge Segment
E9h		Initialize Multi Processor
EAh		Initialize OEM special code
EBh		Initialize PIC and DMA
ECh		Initialize Memory type
EDh		Initialize Memory size
EEh		Shadow Boot Block
EFh		System memory test
F0h		Initialize interrupt vectors
F1h		Initialize Run Time Clock
F2h		Initialize video
F3h		Initialize System Management Mode
F4h	1	Output one beep before boot
F5h		Boot to Mini DOS
F6h		Clear Huge Segment
F7h		Boot to Full DOS

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

POST Codes

There are two types of POST codes: Progress Codes and Error Codes. Progress Codes are designed to show the execution point while booting or executing services. Error Codes are designed to halt on exceptional (fatal) error conditions.

Component Codes

The Component Code is an unsigned integer value that is assigned by the build process. The following tables describe the various ranges of component codes:

The Component Code is assigned to an individual component (or driver) using the POSTCODE= option in the DSC file. If the value that follows POSTCODE= is a hexadecimal or decimal number, in the range 0x00-0xdf, then that code will be used with all POST Codes associated with that driver.

Table 4-4. Component Codes

Range	Description
0x00-0x1f	OEM Components. These values are reserved for OEM components
0x20-0x9f	These values are reserved for SecureCore Tiano™ core components. POSTCODE_CC_VARIABLE_SERVICES (0x20) POSTCODE_CC_KEYBOARD_CONTROLLER (0x21) POSTCODE_CC_BOOT_MODE (0x22) POSTCODE_CC_S3_SUPPORT (0x23) POSTCODE_CC_TCG (0x24) POSTCODE_CC_HDD_PASSWORD (0x25) POSTCODE_CC_CPU_IO (0x26) POSTCODE_CC_BOOT_SCRIPT (0x27) POSTCODE_CC_STATUS_CODE (0x28) POSTCODE_CC_DATA_HUB (0x29) POSTCODE_CC_HII_DATABASE (0x2a) POSTCODE_CC_RESET (0x2b) POSTCODE_CC_METRONOME (0x2c) POSTCODE_CC_INTERRUPT_CONTROLLER (0x2d) POSTCODE_CC_DIAGNOSTIC_SUMMARY (0x2e) POSTCODE_CC_SMBIOS (0x2f) POSTCODE_CC_SMM_COMMUNICATION (0x30) POSTCODE_CC_SMM_RUNTIME (0x31) POSTCODE_CC_SMM_SERVICES (0x32) POSTCODE_CC_FIRMWARE_DEVICE (0x33) POSTCODE_CC_CAPSULE_SERVICES (0x34) POSTCODE_CC_MONOTONIC_COUNTER (0x35) POSTCODE_CC_SMBIOS_EVENT_LOG (0x36) POSTCODE_CC_RTC (0x37) POSTCODE_CC_BOOT_MANAGER (0x38) POSTCODE_CC_VGA (0x39)

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Table 4-4. Component Codes

Range	Description
	POSTCODE_CC_HII_FORMS_BROWSER (0x3a) POSTCODE_CC_BOOT_MENU (0x3b) POSTCODE_CC_USER_MANAGER (0x3c) POSTCODE_CC_TIMER (0x3d) POSTCODE_CC_PCI_BUS (0x3e) POSTCODE_CC_ISA_BUS (0x3f) POSTCODE_CC_IDE_BUS (0x40) POSTCODE_CC_AHCI_BUS (0x41) POSTCODE_CC_SCSI_BUS (0x42) POSTCODE_CC_USB_BUS (0x43) POSTCODE_CC_FLOPPY (0x44) POSTCODE_CC_SERIAL_PORT (0x45) POSTCODE_CC_PS2_MOUSE (0x46) POSTCODE_CC_PS2_KEYBOARD (0x47) POSTCODE_CC_EHCI (0x48) POSTCODE_CC_XHCI (0x49) POSTCODE_CC_UHCI (0x4a) POSTCODE_CC_OHCI (0x4b) POSTCODE_CC_USB_KEYBOARD (0x4c) POSTCODE_CC_USB_MOUSE (0x4d) POSTCODE_CC_USB_MASS_STORAGE (0x4e) POSTCODE_CC_CONSOLE_SPLITTER (0x4f) POSTCODE_CC_GRAPHICS_CONSOLE (0x50) POSTCODE_CC_SERIAL_CONSOLE (0x51) POSTCODE_CC_TEXT_CONSOLE (0x52) POSTCODE_CC_DISK_IO (0x53) POSTCODE_CC_PARTITION (0x54) POSTCODE_CC_SETUP (0x55) POSTCODE_CC_LEGACY_BIOS (0x56) POSTCODE_CC_BLOCK_IO_THUNK (0x57) POSTCODE_CC_CRYPTO (0x58)

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Table 4-4. Component Codes

Range	Description
0xa0-0xaf	These values are reserved for SecureCore Tiano™ platform components. POSTCODE_CC_PLATFORM_STAGE0 (0xa0) - Early PEI Platform Initialization. POSTCODE_CC_PLATFORM_STAGE1 (0xa1) -PEI Platform Initialization. POSTCODE_CC_PLATFORM_DXE (0xa1) - DXE Platform Initialization. POSTCODE_CC_PLATFORM_SMM (0xa1) - SMM Platform Initialization. POSTCODE_CC_PLATFORM_FLASH (0xa2) - Flash Platform Initialization. POSTCODE_CC_PLATFORM_CSM (0xa3) - CSM Platform Initialization. 0xa4-0xa7 - Reserved for future expansion. 0xa8-0xaf - Reserved for use by the individual platform.
0xb0-0xbf	These values are reserved for future expansion.
0xc0-0xcf	These values are reserved for core chipset drivers (north bridge, south bridge and CPU) and are assigned by chipset family. POSTCODE_CC_MEMORY_CONTROLLER (0xc0) - Memory Controller.
0xd0-0xd7	These values are reserved for Small Silicon drivers (SIOs, flash, fingerprint, etc.) POSTCODE_CC_SUPER_IO (0xd0) - Super I/O POSTCODE_CC_FLASH_CONTROLLER (0xd1) - Flash Controller POSTCODE_CC_FLASH_DEVICE (0xd2) - Flash Device POSTCODE_CC_FINGERPRINT (0xd3) - Fingerprint Sensor POSTCODE_CC_CLOCK_CONTROLLER (0xd4) - Clock Controller POSTCODE_CC_MGMT_CONTROLLER (0xd5) - Embedded controller or management controller. 0xd6-0xd7 - Reserved for future expansion.
0xd8-0xdf	Reserved for platform usage.

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Table 4-4. Component Codes

Range	Description
0xe0-0xff	These are not components, but rather represent Architectural Progress Codes or Error Codes detailing milestones in the system boot progress. The corresponding Progress Code value is always set to zero. POSTCODE_PC_SEC_ENTRY (0xe0) - Reset vector. POSTCODE_PC_SEC_EXIT (0xe1) - Leaving SEC/Going to PEI. POSTCODE_PC_PEI_ENTRY (0xe2) - Entering PEI Dispatch. POSTCODE_PC_PEI_EXIT (0xe3) - Exiting PEI Dispatch. POSTCODE_PC_IPL_DXE (0xe4) - Entering DXE IPL's normal boot path. POSTCODE_PC_IPL_S3 (0xe5) - Entering DXE IPL's S3 boot path. POSTCODE_PC_S3_OS (0xe6) - Exiting S3 boot path back to the OS. POSTCODE_PC_IPL_RECOVERY (0xe7) - Entering DXE IPL's recovery boot path. POSTCODE_PC_IPL_EXIT (0xe8) POSTCODE_PC_DXE_ENTRY (0xe9) - Entering DXE Dispatch. POSTCODE_PC_DXE_EXIT (0xea) - Exiting DXE Dispatch. POSTCODE_EC_PEI_MEMORY (0xeb) - No permanent memory found at the end of PEI. POSTCODE_EC_PEI_IPL (0xec) - No DXE IPL found at the end of PEI. POSTCODE_EC_IPL_DXE (0xed) - No DXE found at end of DXE IPL. POSTCODE_EC_IPL_PPI (0xee) - Couldn't find PPIs needed by DXE. POSTCODE_EC_DXE_ARCH (0xef) - Missing one or more architectural protocols at the end of DXE.

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Progress Codes

This section describes the progress code values.

Table 4-5. Progress Codes

Range	Description
0x00-0x1f	Standard progress Codes. All other values are reserved. POSTCODE_PC_COMP_PEI_BEGIN (0x01) - The component was loaded and the PEI entry point called. POSTCODE_PC_COMP_PEI_END (0x02) - The component returned from the PEI entry point. POSTCODE_PC_COMP_DXE_BEGIN (0x03) - The component was loaded and the DXE/UEFI entry point called. POSTCODE_PC_COMP_DXE_END (0x04) - The component returned from the DE/UEFI entry point. POSTCODE_PC_COMP_SUPPORTED (0x05) - The Supported() member function of the component's instance of the Driver Binding protocol was called. POSTCODE_PC_COMP_START (0x06) - The Start() member function of the component's instance of the Driver Binding protocol was called. POSTCODE_PC_COMP_STOP (0x07) - The Stop() member function of the component's instance of the Driver Binding protocol was called. POSTCODE_PC_COMP_SMM_INIT (0x08) - The component was loaded and the entry point called inside of SMM. POSTCODE_EC_DEVICE_ERROR (0x09) - The driver encountered a condition where it cannot proceed due to a hardware failure. POSTCODE_EC_RESOURCE_ERROR (0x0a) - The driver encountered a condition where it cannot proceed due to being unable to acquire resources. POSTCODE_EC_DATA_CORRUPT (0x0b) - The driver encountered a condition where it found invalid data and could not continue.
0x20-0x3f	Component-Specific Progress Codes. These values are specific to the component type.
0x40-0x5f	OEM Progress Codes. These progress codes are reserved for OEM usage.
0x60-0x7f	Reserved. These are reserved for future expansion.

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

CHAPTER 5

Jumper and Connector Locations

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Mainboard Layout 5-3

Clearing Password Check and BIOS Recovery 5-5

Clearing the BIOS Passwords 5-5

Performing a BIOS Recovery 5-6

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Jumper and Connector Locations

Mainboard Layout

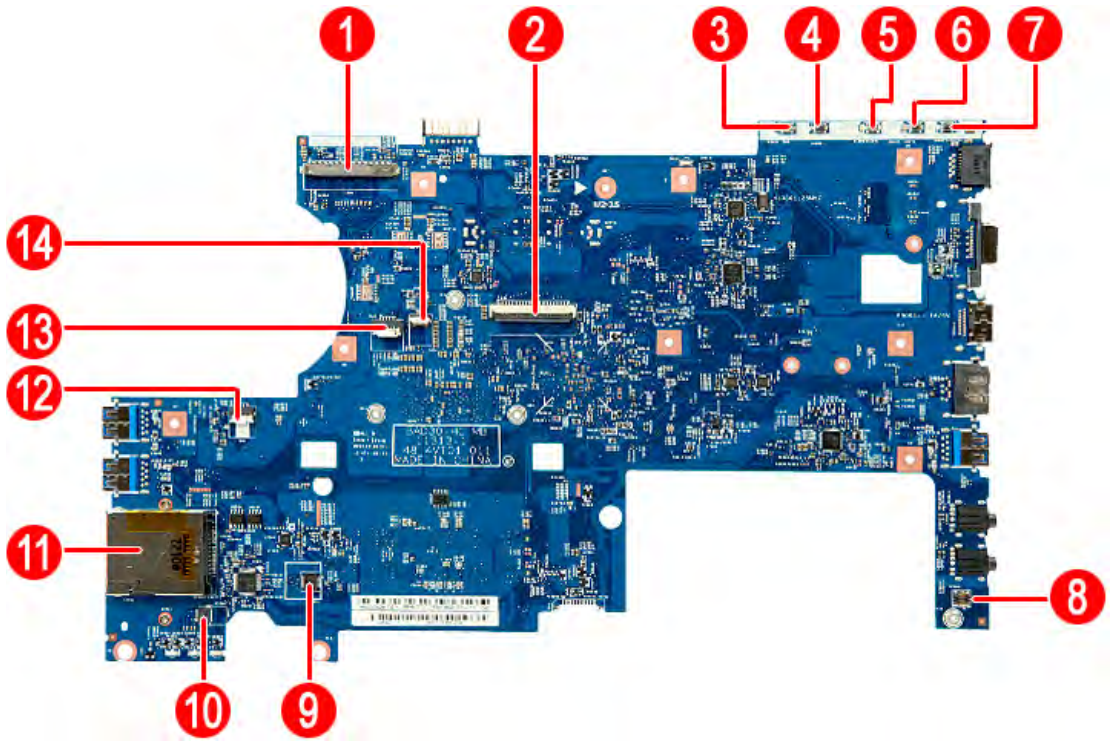


Figure 5-1. Mainboard Top

Table 5-1. Mainboard Top

No.	Code	Component	No.	Code	Component
1	LCD1	LCD cable connector	8	RFCN1	Wireless board connector
2	KB1	Keyboard cable connector	9	TPMCN1	Trusted Platform Module (TPM) connector
3	PBT1	Power Saving / Programming Button	10	SPK1	Speaker cable connector
4	INSBT1	EMAIL Button	11	CARD1	Memory card reader
5	BACBT1	Back Up Botton	12	RD1	Rubber Dome connector
6	MUBT1	Mute button	13	TPAD1	Touchpad board cable connector
7	PWRBT1	Power button	14	FP1	Fingerprint cable connector

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

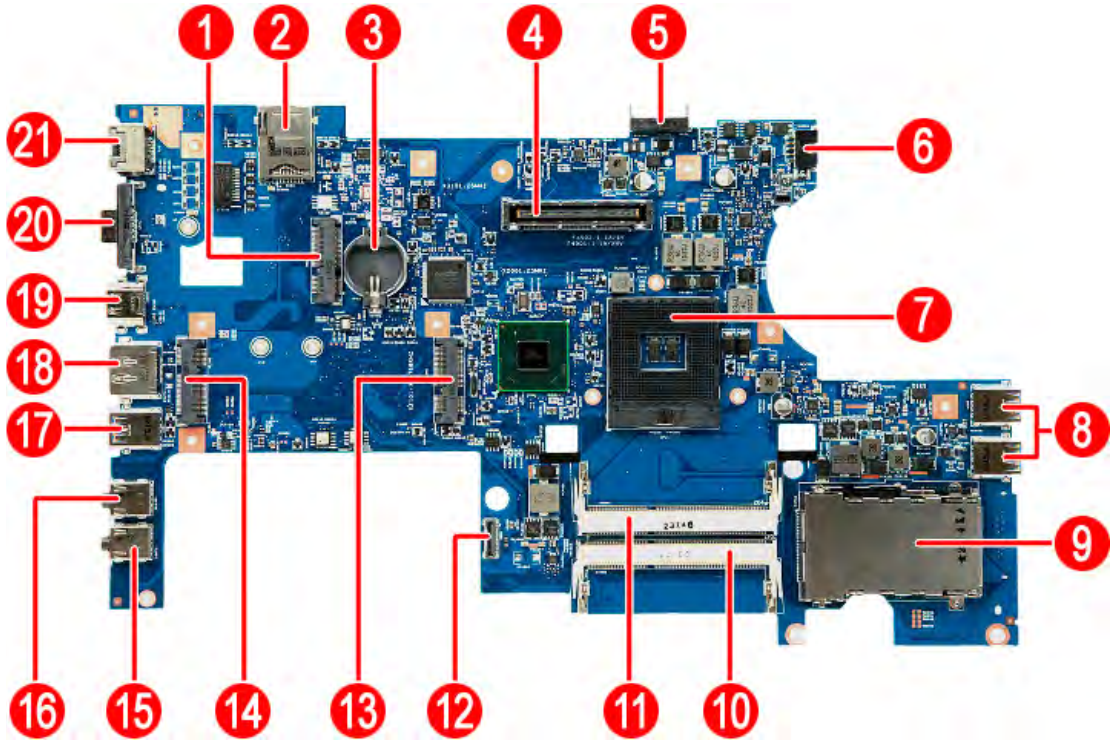


Figure 5-2. Mainboard Bottom

Table 5-2. Mainboard Bottom

No.	Code	Component	No.	Code	Component
1	MSATA1	MSATA module slot	12	HDD1	HDD connector
2	SIM1	SIM card slot	13	WWLAN1	3G network module slot
3	RTC1	RTC battery	14	WLAN1	WLAN module slot
4	DOCK1	Docking device connector	15	LOUT1	Headphones/speaker /line-out jack
5	BAT1	Battery connector	16	MICIN1	Microphone jack
6	DCIN1	DC input cable connector	17	USB1	USB 3.0 port
7	CPU1	CPU socket	18	ESATA1	ESATA port
8	USB2/3	USB 3.0 ports	19	HDMI1	HDMI port
9	EXPC2	Express card slot	20	CRT1	Monitor port
10	DIMM2	DDR3 slot 2	21	RJ1	RJ-45 connector
11	DIMM1	DDR3 slot 1			

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Clearing Password Check and BIOS Recovery

This section provides procedures for:

- Clearing the BIOS passwords
- Performing a BIOS recovery

Clearing the BIOS Passwords

To clear a lost BIOS password (user or supervisor password), you need to short the clear password hardware gap (G2201) located on the mainboard.

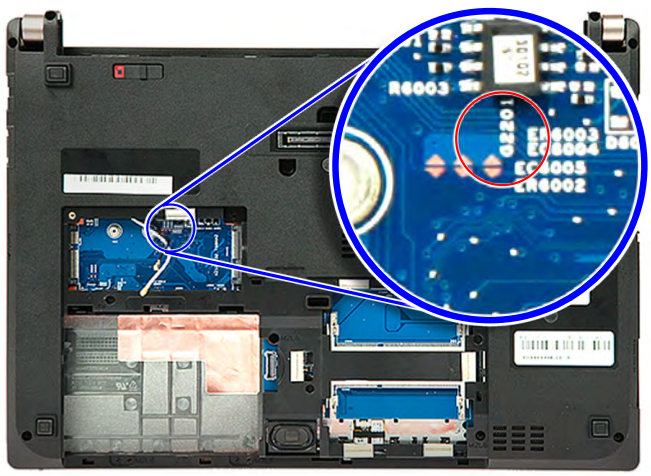


Figure 2-3. G2201 Hardware Gap

1. Shut down the computer and disconnect the AC adapter and all other peripherals from the computer.
2. Remove the battery pack and base door.
3. If the Mini Card slot is occupied, remove the installed wireless module.
4. Locate the G2201 gap.
5. Use an electrical conductivity tool to short the two contacts on the hardware gap together.
6. While resting the tool on the two contacts, plug one end of the AC adapter into the DC-in jack and plug one end to an electrical outlet.
7. Press the ⏻ button to turn on the computer.
8. After the BIOS POST, remove the tool from the hardware gap.
9. If a wireless module was removed, reinstall it.
10. Reinstall the battery pack and the base door.
11. Turn on the computer and press ***F2*** during bootup to access the *Setup Utility*. If no password prompt appears, the BIOS passwords have been cleared. If the prompt appears, repeat steps 4-9 until the BIOS passwords have been cleared.
12. Press ***F9*** to load the system defaults.
13. Press ***F10*** to save the changes you made and close the Setup Utility.

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Performing a BIOS Recovery

Boot Block

An interruption during a BIOS flash procedure (e.g. a power outage) can corrupt the BIOS code, which will cause the system to go into an unbootable state. The BIOS boot block refers to a special BIOS program that can be used to boot up a system with minimum BIOS initialization.You need to access and execute the boot block to reboot the computer and recover the regular BIOS code.

Creating the Crisis Disk

NOTE:

The BIOS crisis recovery disk should be prepared in a computer running the Windows XP, Vista, or 7 OS.

1. Prepare a removable USB flash drive.

   Note that all data in the USB flash drive will be cleared during the creation of the crisis disk.

2. Set up a computer running the Windows XP, Vista, or 7 operating system and plug in the USB flash drive into an available USB port.
3. Open the *Notepad* program and create a new file.
4. Type **`startup.nsh`**.

   For example, the USB key prompt is *fs0*. The *PFlash.efi* and *BIOS.cap* files are in the *fs0: root directory*.

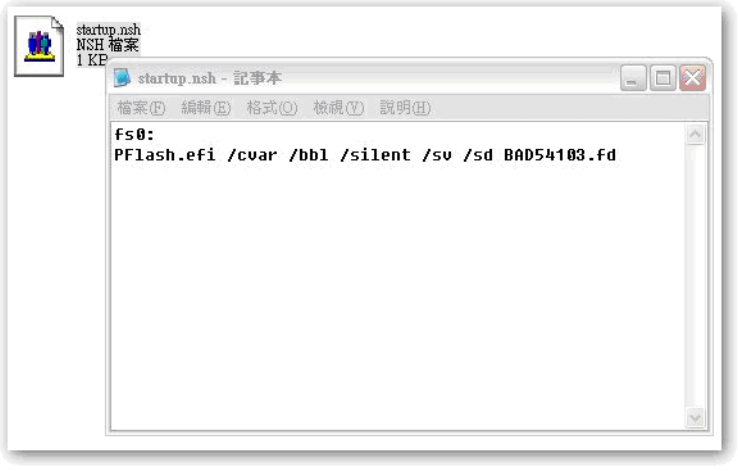


Figure 5-4. Startup.nsh File

5. Save this file as *startup.nsh* in the USB flash drive's root directory.
6. Decompress the Crisis Package Source in the USB flash drive's root directory.

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

7. Eject and reconnect the USB flash drive from the computer, and make sure it contains the following files:
   - *EFI folder*
   - *BIOS image file*
   - *BIOS.cap*
   - *PFlash.efi*
   - *Startup.nsh*

Performing a BIOS recovery

NOTE:
Make sure the battery pack is installed to the system and that the computer is connected to a UPS unit during the BIOS recovery process.

The function hotkey sequence ***Fn***+***Esc*** is used to enable the BIOS recovery process when system is powered On during BIOS POST. If this function is enabled, the system will force the BIOS to execute the boot block program.

To perform a BIOS recovery:

1. Shut down the BIOS failed-computer.
2. Connect the USB flash drive containing the Crisis Recovery disk files to the computer.
3. Press and hold the ***Fn***+***Esc*** keys, then press the power button ⏻.

   The BIOS recovery process begins. When the process is complete the computer will automatically reboot.
4. Disconnect the USB flash drive from the computer.
5. Perform a BIOS flash procedure to update the BIOS firmware. Refer to the "BIOS Flash Utilities" section on page 2-12 for detailed instructions.

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

CHAPTER 6

FRU List

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

TravelMate P633V/P633M Exploded Diagrams. 6-4
Main Assembly 6-4
LCD Assembly. 6-6

FRU List 6-8

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

FRU (Field Replaceable Unit) List

This chapter provides users with a FRU (Field Replaceable Unit) listing in global configurations for the TravelMate P633V/P633M. Refer to this chapter whenever ordering for parts to repair or for RMA (Return Merchandise Authorization).

NOTE:

WHEN ORDERING FRU PARTS, check the most up-to-date information available on the regional web or channel. Part number changes will not be noted on the printed Service Guide. For ACER AUTHORIZED SERVICE PROVIDERS, the Acer office may have a DIFFERENT part number code from those given in the FRU list of this printed Service Guide. Users MUST use the local FRU list provided by the regional Acer office to order FRU parts for repair and service of customer machines.

NOTE:

To scrap or to return the defective parts, users should follow the local government ordinance or regulations on how to dispose it properly, or follow the rules set by the regional Acer office on how to return it.

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

TravelMate P633V/P633M Exploded Diagrams

Main Assembly

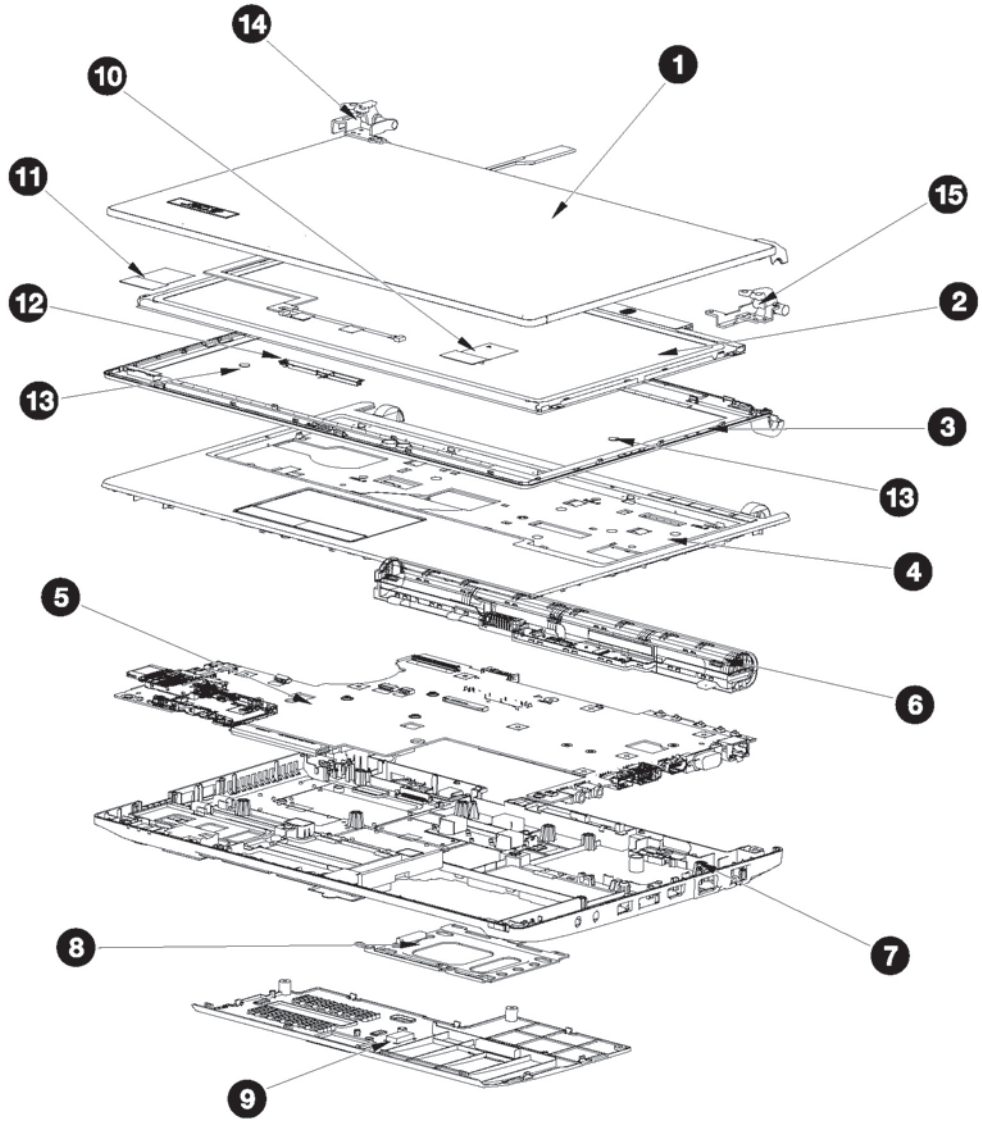


Figure 6-1. Main Assembly Exploded Diagram

Table 6-1. Main Assembly Exploded Diagram

No.	Description	Part Number
1	LCD Panel	60.4VT06.001
2	LCD Module	LK.13305.005
3	LCD Bezel w/ CCD	60.4VT06.001

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook.
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Table 6-1. Main Assembly Exploded Diagram

No.	Description	Part Number
4	Upper Case	65.4VT03.001
5	Mainboard	55.4VT01.001G
6	Battery Pack	BT.00805.016
7	Lower Case	60.4VT02.001
8	HDD Bracket	60.4VT04.001
9	Base Door	60.4VT03.001
10	Wifi Antenna Main	25.90ADZ.001
11	Wifi Antenna Aux	25.90AE0.001
12	CCD Module	56.18007.A61
13	Bezel Screw Mylar	40.4VT16.001
14	LCD Hinge Left (LH)	34.4VT02.011
15	LCD Hinge Right (LH)	34.4VT03.011

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook.
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

LCD Assembly

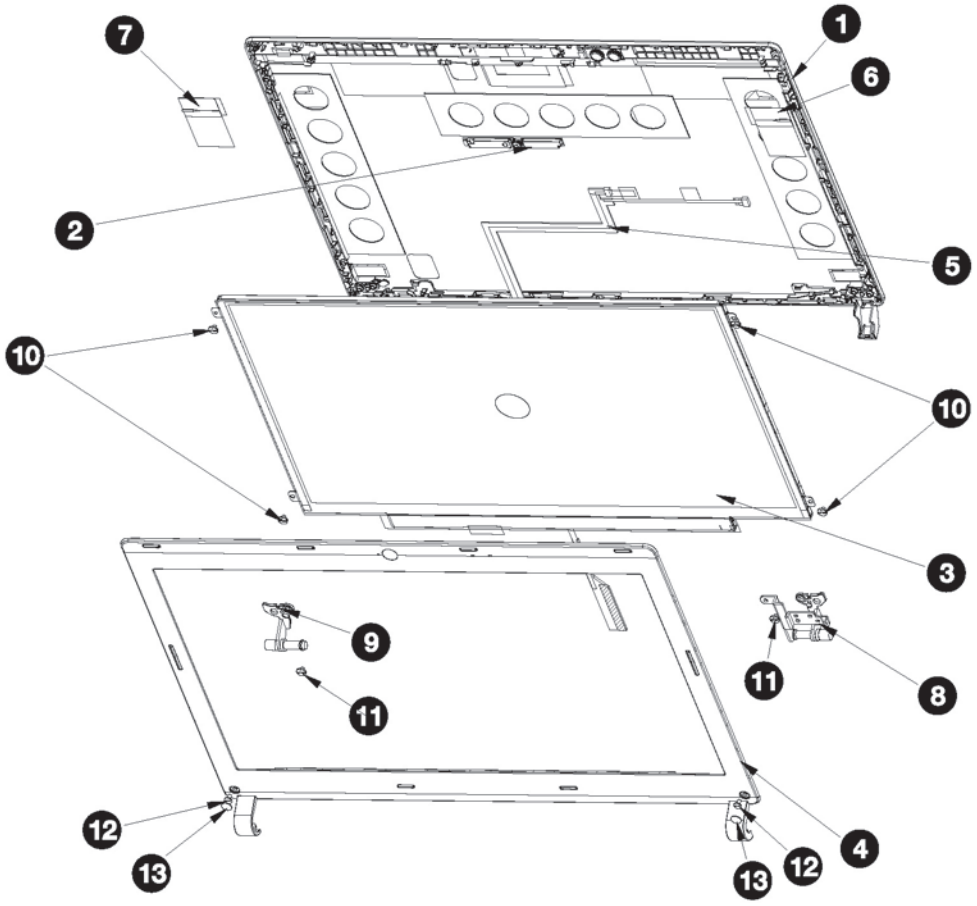


Figure 6-2. LCD Assembly Exploded Diagram

Table 6-2. LCD Assembly Exploded Diagram

No.	Description	Part Number
1	LCD Panel Assembly	60.4VT06.001
2	CCD Module	56.18007.A61
3	LCD Module	LK.13305.005
4	LCD Bezel w/ CCD	60.4VT06.001
5	LCD Cable w/ MIC	50.4VT01.001
6	3G Main Antenna	25.90ADB.001
7	3G Auxiliary Antenna	25.90ADC.001
8	LCD Hinge Right (LH)	34.4VT03.011
9	LCD Hinge Left (LH)	34.4VT02.011

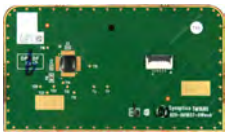
HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook.
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Table 6-2. LCD Assembly Exploded Diagram

No.	Description	Part Number
10	M2 x L2.5 Wafer Screw	86.00D72.620
11	M2 x L2.5 Screw	86.2A562.2R5
12	M2 x L3.5 Screw	86.6A562.3R5
13	Bezel Screw Mylar	40.4VT16.001

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook.
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

FRU List

Category	Description	Acer Part No.
ADAPTER		
	"ADP LITEON 65W 19V PA-1650-69AH, LOW PRO"	AP.06503.030
	ADP 65W 19V 3P LV5 A065R013H LOW PROFILE	AP.0650H.002
BATTERY		
	BATTERY SANYO AS2009B LI-ION 4S1P SANYO 4 CELL 2960MAH MAIN COMMON FOR LONG LIFE CYCLE ID:AS09B3E	KT.00403.010
	BATTERY PANASONIC AS10I LI-ION 4S2P PANASONIC 8 CELL 6000MAH MAIN COMMON FOR LONG LIFE CYCLE ID:AS10I5E	KT.00805.001
BOARDS		
	FINGER PRINTER EGISTEC 8NF-603WB2-W33H	55.V7EN1.001
	BAD30_HC SW BOARD 11956-1M(D)	55.V7MN1.001
	TOUCHPAD SYNAPTICS TM-01680-003	56.V4M01.001

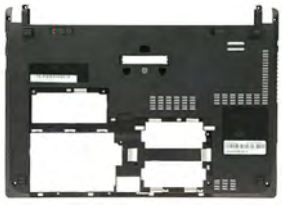
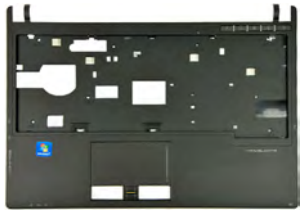
HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook.
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Category	Description	Acer Part No.
	WLAN INTEL WIRELESS-N ABGN 6235 JACKSON	KI.JKH01.002
	WLAN BROADCOM 43228+20702	NI.23600.100
	WLAN 3RD WIFI 2X2 AGN+ BT4.0 ATHEROS	NI.23600.102
	WLAN 3RD WIFI 2X2 AGN+ BT4.0 ATHEROS	NI.23600.103
	TPM MODULE FOR BAD50_HC	NC.22911.002
	ASSY TP BUTTON BAD30_UCASE_ASSY_P FINGER	RESERVE
CABLES		
	CORD ARGENTINE,10A 250V3G,1.8M	27.01518.0U1
	CORD_MM 7A250V 2P 1830 KOREAN	27.01518.531
	CORD UK 2.5A 250V 3P BK	27.01518.541
	CORD_MM JAPAN 7A 125V 2P BK	27.01518.551
	CORD DENMARK 2.5A 250V 3P BK	27.01518.561
	CORD SOUTH AFRICA 16A 250V BK	27.01518.571
	CORD SWISS 2.5A 250V 3P BK	27.01518.581
	CORD CHINA 10A 250V 3P	27.01518.591
	CORD ITALY 10A 250V 3P BK	27.01518.611
	CORD 2.5A 250V AUSTRALIA BK	27.01518.621
	CORD 2.5A 250V SOUTH AFRICA BK	27.01518.631
	CORD 10A 125V 3P US BK	27.01518.641
	CORD 7A 125V 2P JAPAN BK	27.01518.661

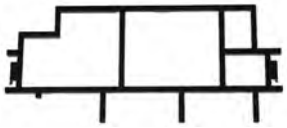
HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook.
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Category	Description	Acer Part No.
CABLES	CORD 10A 250V 3P DENMARK BK	27.01518.671
	CORD 16A 250V SOUTH AFRICA BK	27.01518.681
	CORD 10A 250V 3P SWISS BK	27.01518.691
	CORD 10A 250V 3P CHINA BK	27.01518.701
	CORD 10A 250V 3P ITALY BK	27.01518.711
	CORD 6A 250V SOUTH AFRICA BK	27.01518.721
	CORD 16A 250V 3P EUR BK	27.01518.731
	CORD 250V 10~16A 3P ISRAEL	27.01518.761
	CORD USA/W CNS 2.5A 125V 8121-	27.01518.781
	"POWER CORD TAIWANESE BLACK,1.8"	27.01518.A11
	"POWER CORD BRAZIL,BLK,1.8M"	27.01518.A41
	CORD 1.83M BRAZIL BLK	27.01518.H81
	CORD 5A 250V 3P UK BK	27.03118.001
	POWER CORD ACA / ACNZ ANNIE	27.03218.021
	CORD 7.5A 250V 3P AUSTRALIA BK	27.03218.051
	CORD 7A 125V JAPAN 2PIN BK	27.03518.161
	CORD US 7A 125V BK	27.T30V1.001
	CORD EUR 250V 3P BK	27.T30V1.004
	BAD40-CR HDD CABLE ICT	50.V7EN1.002
	BAD40-CR HDD CABLE JH	50.V7EN1.002
	BAD40-HC HDD CABLE HT	50.V7EN1.002
	BAD30_DCIN_CABLE	50.V7MN1.001
	BAD30_DCIN_CABLE_SE	50.V7MN1.001

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook.
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Category	Description	Acer Part No.
	LCD CABLE_New_MIC_HL BAD30	50.V7MN1.002
	LCD CABLE_New_MIC_HT BAD30	50.V7MN1.002
CAMERA		
	CAMERA 1.0M_HD CNFB1D921004970LH CHICONY	57.M2DN1.002
	CAMERA 1.0M_HD HF1016-A21U-OV02 SUYIN	57.M2DN1.003
CASE/COVER/BRACKET ASSEMBLY		
	60_BAD30_HDD_BRACKET _ASSY	33.V7MN1.001
	BAD30_LCD_HINGE_L_LH	33.V7MN1.002
	BAD30_LCD_HINGE_R_LH	33.V7MN1.003
	60_BAD30_DOOR_1615	42.V7MN1.001
	BAD30_SD_CARD	42.V7MN1.002
	BAD30_EXPRESS_CARD	42.V7MN1.003
	60_BAD30_LCASE_ASSY	60.V7MN1.001
	BAD30_UCASE_ASSY W/ TP&FP	60.V7MN1.002
	60_BAD30_UCASE_ASSY	RESERVE

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Category	Description	Acer Part No.
	ASSY 60 LCD BEZEL W/CCD_BAD30	60.V7MN1.004
	ASSY 60 LCD PANEL BAD30	60.V7MN1.005
	BAD30_TP_SUPPORT	RESERVE
COMMUNICATION MODULE		
	ANTENNA WIFI MAIN R BAD30	50.V7MN1.003
	ANTENNA WIFI AUX L BAD30	50.V7MN1.004
CPU/PROCESSOR		
	IC CPU INTEL CORE I5 I5-2450M PGA 2.5G	KC.24501.DMP
	IC CPU IVY BRIDGE I5-3210M 2.5GHZ DC 3MB	KC.32101.DMP
	IC CPU IVY BRIDGE I5-3320M 2.6GHZ DC 3MB	KC.33201.DMP
	IC CPU IVY BRIDGE I7-3520M L-0 4MB 2C PG	KC.35201.DMP
HDD/HARD DISK DRIVE		
	HDD 320GB HTS543232A7A384 0J28213	KH.32007.017
	HDD 320GB WD WD3200LPVT-22G33T0 7MMH 5.4	KH.32008.031
	HDD 500GB HTS545050A7E380 0J23335 5.4K	KH.50007.023
	HDD 500GB WD5000LPVT-22G33T0 7MMH 5.4K	KH.50008.040

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook.
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Category	Description	Acer Part No.
HEATSINK		
	ASSY THM UMA SUNON+SUNON BAD30 HC	60.V7MN1.003
KEYBOARD		
	KB 9Z.N6HPW.10A ARABIC BW4P	KB.I140A.325
	KB 9Z.N6HPW.11A BELIGIAN 89KEY BW4P	KB.I140A.326
	KB 9Z.N6HPW.11B 89KEY BW4P	KB.I140A.327
	KB 9Z.N6HPW.113 CZECH/SLOVAK 89KEY BW4P	KB.I140A.328
	KB 9Z.N6HPW.102 TAIWAN	KB.I140A.329
	KB 9Z.N6HPW.10D DANISH 89KEY BW4P	KB.I140A.330
	KB 9Z.N6HPW.12A FRENCH/ARABIC 89KEY BW4P	KB.I140A.331
	KB 9Z.N6HPW.10F FRENCH BW4P	KB.I140A.332
	KB 9Z.N6HPW.10G GERMAN 89KEY BW4P	KB.I140A.333
	KB 9Z.N6HPW.10L GREEK BW4P	KB.I140A.334
	KB 9Z.N6HPW.10Q HUNGARIAN 89KEY BW4P	KB.I140A.335
	KB 9Z.N6HPW.10E ITALIAN 89KEY BW4P	KB.I140A.336
	KB 9Z.N6HPW.10J JP 93KEY BW4P	KB.I140A.337
	KB 9Z.N6HPW.10K KOREA BW4P	KB.I140A.338
	KB 9Z.N6HPW.11K NORDIC BW4P	KB.I140A.339
	KB 9Z.N6HPW.10N NORWEGIAN 89KEY BW4P	KB.I140A.340

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Category	Description	Acer Part No.
KEYBOARD	KB 9Z.N6HPW.106 PORTUGAL 89KEY BW4P	KB.I140A.341
	KB 9Z.N6HPW.10R RUSSIAN BW4P	KB.I140A.342
	KB 9Z.N6HPW.11F SLOVENIA 89KEY BW4P	KB.I140A.343
	KB 9Z.N6HPW.10S SPANISH 89KEY BW4P	KB.I140A.344
	KB 9Z.N6HPW.10W SWEDISH BW4P	KB.I140A.345
	KB 9Z.N6HPW.100 SWISS 89KEY BW4P	KB.I140A.346
	KB 9Z.N6HPW.103 THAI BW4P	KB.I140A.347
	KB 9Z.N6HPW.10T TURKISH 89KEY BW4P	KB.I140A.348
	KB 9Z.N6HPW.10U UK BW4P	KB.I140A.349
	KB 9Z.N6HPW.11D US-INT	KB.I140A.350
	KB 9Z.N6HPW.10H HEBREW BW4P	KB.I140A.351
	KB 9Z.N6HPW.12M US/W CANADIAN FRENC BW4P	KB.I140A.352
	KB 9Z.N6HPW.10B BULGARIAN	KB.I140A.353
LCD		
	"LCD 13.3""WXGA ANT*2 Ckk W/ANTENNA"	6M.V7MN1.001
	"suLCD AUO 13.3"" NONE GLARE B133XW03 V3"	LK.13305.005
MAINBOARD		
	BAD30_HC UMA-MB VPRO 11313-1M(D)M-SATA	NB.V7L11.001
	BAD30_HC UMA-MB SBA 11313-1M(D)M-SATA	NB.V7M11.001

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook.
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Category	Description	Acer Part No.
MEMORY		
	SODIMM 2G NT2GC64B88G0NS-CG DDR3 1333MHZ	KN.2GB03.025
	SODIMM 2G ACR256X64D3S13C9G DDR3 1333MH	KN.2GB07.006
	SODIMM 2G EBJ20UF8BDU0-GN-F DDR3 1600MHZ	KN.2GB09.012
	SODIMM 2G HMT325S6CFR8C-H9 DDR3 1333MHZ	KN.2GB0G.031
	SODIMM 4G NT4GC64B8HG0NS-CG DDR3 1333	KN.4GB03.009
	SODIMM 4G ACR512X64D3S13C9G DDR3 1333MHZ	KN.4GB07.001
	SODIMM 4G ACR512X64D3S16C11G DDR3	KN.4GB07.003
MEMORY	SODIMM 4G HMT351S6CFR8C-H9 DDR3 1333MHZ	KN.4GB0G.012
MICROPHONE		
	MICROPHONE BAD40HC MEMS ARRAY TRANSOUND	RESERVE
MISCELLANEOUS		
	HDD DASP 7MM	47.M2DN1.002
	BAD40_DOCKING_RUBBER	47.V4B01.005
	TPM RUBBER	47.V7EN1.002
	BAD30_HDD_DASP_MYLAR	47.V7MN1.001
	BAD30 _BEZEL_SCREW_ MYLAR	47.V7MN1.002
SCREWS		
	SCRW WAFER M2*L2.5 BZN RP NOTE	86.AGV01.003
	SCRW WAFER M2*L2.5 BZN RP NOTE	86.AGV01.003

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook.
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Category	Description	Acer Part No.
	SCRW 2X6 NYLOK	86.TK501.003
	SCRW HMS CN2X2.5 NYLOK	86.V7MN1.001
	SCREW M2XL3.5 Ni SILVER COLOR	86.V7MN1.002
SPEAKER		
	SPEAKER BAD30HC GYF	23.V7MN1.001
	SPEAKER BAD30HC YG	23.V7MN1.001

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook.
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

CHAPTER 7

Test Compatible Components

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Microsoft Windows 7 Environment Test. 7-4

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Test Compatible Components

This computer's compatibility is tested and verified by Acer's internal testing department. All of its system functions are tested under Windows® 7 environment.

Refer to the following lists for components, adapter cards, and peripherals which have passed these tests. Regarding configuration, combination and test procedures, please refer to the Compatibility Test Report released by the Acer Mobile System Testing Department.

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Microsoft Windows 7 Environment Test

Vendor	Type	Description	Part No.
Adapter			
10001023 LITE-ON	65W_HF	"Adapter LITE-ON 65W_HF 19V 1.7x5.5x11 Yellow PA-1650-69AH, low profile HSF LF"	AP.06503.030
60016453 CHICONY POWER	65W_HF	"Adapter Chicony Power 65W_HF 19V 1.7x5.5x11 Yellow CPA09-A065N1, LV5, low profile & HSF (A065R013H) LF"	AP.0650H.002
Audio Codec			
PLM00004 Conexant	Conexant CX-20584	Conexant Audio Codec CX-20584 21Z	LZ.21000.113
Battery			
60001921 SANYO	4CELL3.0	Battery SANYO AS2009B Li-Ion 4S1P SANYO 4 cell 2960mAh Main COMMON ID:AS09B3E	BT.00403.019
60001535 PANASONIC	8CELL3.0	Battery PANASONIC AS10I Li-Ion 4S2P PANASONIC 8 cell 6000mAh Main COMMON ID:AS10I5E	BT.00805.016
60001921 SANYO	4CELL3.0	Battery SANYO AS2009B Li-Ion 4S1P SANYO 4 cell 2960mAh Main COMMON for long life cycle ID:AS09B3E	KT.00403.010
60001535 PANASONIC	8CELL3.0	Battery PANASONIC AS10I Li-Ion 4S2P PANASONIC 8 cell 6000mAh Main COMMON for long life cycle ID:AS10I5E	KT.00805.001
Camera			
10001023 LITE-ON	HD	Liteon HD LT_OV9726_SP	NC.21411.003
10001023 LITE-ON	HD	Liteon HD LT_HN162_AU	NC.21411.004
10001044 CHICONY	HD	Chicony HD CH_OV9726_AU	NC.21411.005
10001044 CHICONY	HD	Chicony HD CH_HN162_SP	NC.21411.007
PLM00012 Suyin	HD	Suyin HD SY_OV9726_AU	NC.21411.008
PLM00012 Suyin	HD	Suyin HD SY_HN162_RT	NC.21411.009

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Vendor	Type	Description	Part No.
Card Reader			
PLM00014 ODM	5 in 1-Build in	"5 in 1-Build in MS, MS Pro, SD, SC, XD"	CR.21500.013
Cover			
9999995 ONE TIME VENDOR	Aluminum	Aluminum	LZ.21000.006
9999995 ONE TIME VENDOR	Normal	Normal	LZ.21000.010
9999995 ONE TIME VENDOR	Normal w/Camera	Normal w/Camera	LZ.21000.011
CPU			
10001067 INTEL	Ci32350M	CPU Intel Core i3 i3-2350M PGA 2.3G 35W 2/4	KC.23501.DMP
10001067 INTEL	Ci32370M	CPU Intel Core i3 i3-2370M PGA 2.4G 35W 2/4	KC.23701.DMP
10001067 INTEL	Ci52450M	CPU Intel Core i5 i5-2450M PGA 2.5G 35W 2/4	KC.24501.DMP
10001067 INTEL	Ci52520M	CPU Intel Core i5 i5-2520M PGA 2.5G 35W 2/4	KC.25201.DMP
10001067 INTEL	Ci52540M	CPU Intel Core i5 i5-2540M PGA 2.6G 35W 2/4	KC.25401.DMP
10001067 INTEL	Ci72640M	CPU Intel Core i7 i7-2640M PGA 2.8G 35W 2/4	KC.26401.DMP
10001067 INTEL	Ci72670QM	CPU Intel Core i7 i7-2670QM PGA 2.2G 45W 4/8	KC.26701.QMP
10001067 INTEL	Ci33110M	CPU Intel Core i3 i3-3110M PGA 2.3G 1600 35W Ivy Bridge	KC.31101.DMP
10001067 INTEL	Ci53210M	CPU Intel Core i5 i5-3210M PGA 2.5G 1600 35W Ivy Bridge	KC.32101.DMP
10001067 INTEL	Ci53320M	CPU Intel Core i5 i5-3320M PGA 2.6G 1600 35W Ivy Bridge	KC.33201.DMP
10001067 INTEL	Ci53360M	CPU Intel Core i5 i5-3360M PGA 2.8G 1600 35W Ivy Bridge	KC.33601.DMP
10001067 INTEL	Ci73520M	CPU Intel Core i7 i7-3520M PGA 2.9G 1600 35W Ivy Bridge	KC.35201.DMP
10001067 INTEL	Ci73612QM	CPU Intel Core i7 i7-3612QM PGA 2.1G 1600 35W Ivy Bridge	KC.36101.QM2

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Vendor	Type	Description	Part No.
Finger Print			
PLM00019 LTT	ES603-WB w/o ROM	LTT ES603-WB w/o ROM	FP.22000.012
G sensor			
PLM00028 STMicro	G sensor	STMicron LIS3DH MEMS G Sensor	LZ.23700.007
HDD			
60003544 LITE-ON OPT	FM0128S3	Flash Disk LITE-ON SSD NAND 128GB LMT-128M3M LF+HF firmware: VYC2	KF.1280L.001
60003544 LITE-ON OPT	FM0256S3	Flash Disk LITE-ON SSD NAND 256GB LMT-256M3M LF+HF firmware:VZC2	KF.2560L.001
60002005 HGST SG	N320GB7.2GKS7.0	"HDD HGST 2.5"" 7200rpm 320GB HTS723232A7A364,0J13223, Eagle C7, 320G/P SATA 16MB LF+HF F/W:DA3735 7mmzh"	KH.32007.014
60002005 HGST SG	N320GB5.4KS	"HDD HGST 2.5"" 5400rpm 320GB DUMMY P.N for BOM use SATA 8MB LF F/W:NA"	KH.32007.015
60002005 HGST SG	N320GB5.4KS_4K	"HDD HGST 2.5"" 5400rpm 320GB HTS545032A7E380, Jaguar B7 500G/P SATA 8MB LF+HF F/W:DA4837"	KH.32007.016
60002005 HGST SG	N320GB5.4KS	"HDD HGST 2.5"" 5400rpm 320GB HTS543232A7A384,0J28213,Eagle B7, 320G/P 7mmzh SATA 8MB LF+HF F/W:DA4788"	KH.32007.017
60001994 WD	N320GB5.4KS_4K	"HDD WD 2.5"" 5400rpm 320GB WD3200LPVT-22G33T0,MN500S, 500G/P, 7mmzh HDD SATA 8MB LF+HF F/W:01.01A01"	KH.32008.031
60002005 HGST SG	N500GB5.4KS	"HDD HGST 2.5"" 5400rpm 500GB Dummy P.N for 500G SATA 8MB LF+HF F/W:"	KH.50007.015
60002005 HGST SG	N500GB5.4KS_4K	"HDD HGST 2.5"" 5400rpm 500GB HTS545050A7E380, Jaguar B7,0J23335, 500G/P SATA 8MB LF+HF F/W:DA4837 7mmzh HDD"	KH.50007.023
60001994 WD	N500GB5.4KS_4K	"HDD WD 2.5"" 5400rpm 500GB WD5000LPVT-22G33T0, MN500S, 500G/P, 7mmzh HDD SATA 8MB LF+HF F/W: 01.01A01"	KH.50008.040

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Vendor	Type	Description	Part No.
10001079 SYNNEX	FM0128S3	Flash Disk SANDISK SSD NAND 128GB SD5SF2-128G(X100) LF+HF	KN.1280D.002
10001079 SYNNEX	FM0256S3	Flash Disk SANDISK SSD NAND 256GB SD5SF2-256G(X100) LF+HF	KN.2560D.007
60004864 DARFON	BW4P_A10B	Keyboard ACER BW4P_A10B BW4P Internal 14 Standard Black NONE Y2010 Acer Legend Painting	KB.I140A.265
LAN			
10001067 INTEL	Lewisville-LM	Lan Intel LAN 82579LM vPro	KI.LWS01.LM1
60001948 BROADCOM	BCM57761	Broadcom BCM57761	NI.22400.056
LCD			
60003316 AUO	NLED13.3WXGAS	LED LCD AUO 13.3" WXGA None Glare B133XW03 V3 LF 200nit 8ms 400:1 (Power saving)	LK.13305.005
MEMORY			
60002041 QIMONDA	SO2GBIII	Memory NONE SO-DIMM DDRIII 2GB dummy LF+HF	KN.2GB00.004
60001993 NANYA	SO2GBIII13	Memory NANYA SO-DIMM DDRIII 1333 2GB NT2GC64B88G0NS-CG LF+HF	KN.2GB03.025
60024207 KINGSTON-FAR EAST	SO2GBIII13	Memory KINGSTON SO-DIMM DDRIII 1333 2GB ACR256X64D3S13C9G LF+HF	KN.2GB07.006
60004668 ELPIDA	SO2GBIII13	Memory ELPIDA SO-DIMM DDRIII 1600 2GB EBJ20UF8BDU0-GN-F LF+HF 256*8 38nm	KN.2GB09.012
60002215 SAMSUNG	SO2GBIII13	Memory SAMSUNG SO-DIMM DDRIII 1333 2GB M471B5773DH0-CH9 LF 256*8	KN.2GB0B.030
60001955 A-DATA	SO2GBIII13	Memory A-DATA SO-DIMM DDRIII 1333 2GB AD73I1B0873EV LF+HF	KN.2GB0C.008
60002045 HYNIX	SO2GBIII13	Memory HYNIX SO-DIMM DDRIII 1333 2GB HMT325S6CFR8C-H9 LF+HF 256x8 38nm	KN.2GB0G.031
60002041 QIMONDA	SO4GBIII	Memory NONE SO-DIMM DDRIII 4GB dummy LF+HF	KN.4GB00.003
60001993 NANYA	SO4GBIII13	Memory NANYA SO-DIMM DDRIII 1333 4GB NT4GC64B8HG0NS-CG LF+HF 46nm	KN.4GB03.009

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Vendor	Type	Description	Part No.
60024207 KINGSTON-FA R EAST	SO4GBIII13	Memory KINGSTON SO-DIMM DDRIII 1333 4GB ACR512X64D3S13C9G LF+HF	KN.4GB07.001
60024207 KINGSTON-FA R EAST	SO4GBIII	Memory KINGSTON SO-DIMM DDRIII 1600 4GB ACR512X64D3S16C11G LF+HF 256*8 38nm	KN.4GB07.003
60004668 ELPIDA	SO4GBIII13	Memory ELPIDA SO-DIMM DDRIII 1600 4GB EBJ40UG8BBU0-GN-F LF+HF 512*8 38nm	KN.4GB09.005
60002215 SAMSUNG	SO4GBIII13	Memory SAMSUNG SO-DIMM DDRIII 1333 4GB M471B5273DH0-CH9 LF 256*8 35nm	KN.4GB0B.015
60002215 SAMSUNG	SO4GBIII13	Memory SAMSUNG SO-DIMM DDRIII 1333 4GB M471B5173BH0-CH9 LF+HF 512*8 35nm	KN.4GB0B.018
60001955 A-DATA	SO4GBIII13	Memory A-DATA SO-DIMM DDRIII 1333 4GB AD73I1C1674EV LF+HF	KN.4GB0C.001
60002045 HYNIX	SO4GBIII13	Memory HYNIX SO-DIMM DDRIII 1333 4GB HMT351S6CFR8C-H9 LF+HF 256x8 38nm	KN.4GB0G.012
NB Chipset			
10001067 INTEL	HM77	NB Chipset Intel CS HM77 Chief River	KI.G7501.002
10001067 INTEL	QM77	NB Chipset Intel CS QM77	KI.G7501.003
Operating System			
10000981 MISC	W7PR32X	Microsoft OS Win7 Pro W7PR32X	CD.W7P01.003
10000981 MISC	W7PR64X	Microsoft OS Win7 Pro W7PR64X	CD.W7P01.004
10000981 MISC	W7PR32XRU	Microsoft OS Win7 Pro W7PR32XRU	CD.W7P01.007
10000981 MISC	W7PR64XRU	Microsoft OS Win7 Pro W7PR64XRU	CD.W7P01.010
10000981 MISC	W7PR32XIN	Microsoft OS Win7 Pro W7PR32XIN	CD.W7P01.011
10000981 MISC	W7PR64XIN	Microsoft OS Win7 Pro W7PR64XIN	CD.W7P01.012
10000981 MISC	W7PR32XSC	Microsoft OS Win7 Pro W7PR32XSC	CD.W7P01.015

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Vendor	Type	Description	Part No.
10000981 MISC	W7PR64XSC	Microsoft OS Win7 Pro W7PR64XSC	CD.W7P01.016
10000981 MISC	W7PR32XEM	Microsoft OS Win7 Pro W7PR32XEM	CD.W7P01.019
10000981 MISC	W7PR64XEM	Microsoft OS Win7 Pro W7PR64XEM	CD.W7P01.020
SB Chipset			
9999995 ONE TIME VENDOR	N	N	KI.22800.011
Software			
10000981 MISC	McAfee	Antivirus application McAfee	SR.23900.001
TPM			
PLM00030 Nuvoton	NPCT420R	"Nuvoton NPCT420R Foxconn Module 12x12x3.7mm (TPM FW:v3.69,TCG 1.2 rev.116,TxT compliance) HSF with EK embedded"	NC.22911.002
PLM00029 NationalZ	SSX44-B module	NationZ SSX44-B Foxconn Module 12x12x3.7mm HSF (TCM)	NC.22911.003
VGA Chip			
10001067 INTEL	UMA	UMA (Intel)	KI.23200.038
WiFi Antenna			
10000105 WNC	PIFA	PIFA	LZ.23500.006
Wireless LAN			
10001067 INTEL	INT6235H	"Lan Intel WLAN 6235AN.HMWG Jackson Peak 2, 2X2 AGN+BT"	KI.JKH01.002
10001018 HON HAI	3rd WiFi 2x2 AGN+ BT4.0	Foxconn 3rd WiFi 2x2 AGN+ BT4.0 Broadcom 43228+20702 (WiFi 43228 2x2 DB AGN+BT4.0 20702)	NI.23600.100
10001018 HON HAI	3rd WiFi 2x2 AGN+ BT4.0	Foxconn 3rd WiFi 2x2 AGN+ BT4.0 Atheros WB222	NI.23600.102
10001023 LITE-ON	3rd WiFi 2x2 AGN+ BT4.0	Liteon 3rd WiFi 2x2 AGN+ BT4.0 Atheros WB222	NI.23600.103

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

CHAPTER 8

Online Support Information

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

Online Support Information

This section describes online technical support services available to help users repair their Acer Systems.

For distributors, dealers, ASP or TPM, please refer the technical queries to a local Acer branch office. Acer Branch Offices and Regional Business Units may access our website. However some information sources will require a user i.d. and password. These can be obtained directly from Acer CSD Taiwan.

Acer's Website offers convenient and valuable support resources.

In the Technical Information section users can download information on all of Acer's Notebook, Desktop and Server models including:

- Service guides for all models
- Bios updates
- Software utilities
- Spare parts lists
- TABs (Technical Announcement Bulletin)

For these purposes, we have included an Acrobat File to facilitate the problem-free downloading of our technical material.

Also contained on this website are:

- Detailed information on Acer's International Traveller’s Warranty (ITW)
- Returned material authorization procedures
- An overview of all the support services we offer, accompanied by a list of telephone, fax and email contacts for all technical queries.

We are always looking for ways to optimize and improve our services, so do not hesitate to direct any suggestions or comments to us.

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru

HTTP://MYCOMP.SU/ - Maintenance and Service Guide,Service Manual,Motherboard Schematics for Laptop/notebook
РЕМОНТ НОУТБУКОВ. Запчасти и комплектующие для ноутбука. Схемы, сервис мануалы, инструкции по разборке ноутбука.
ВОССТАНОВЛЕНИЕ ДАННЫХ. г. Санкт-Петербург, Тел.(812)951-37-99, Тел.8-921-951-37-99,ICQ:573812745, service@it-lux.ru